

Table 10 Necropsy findings
Male, Female, 13w

Organs and findings	Sex Group and dose	Male				Female			
		Control	4 mg/kg	20 mg/kg	100 mg/kg	Control	4 mg/kg	20 mg/kg	100 mg/kg
		Number of animals	10	9	10	9	10	10	10
Genital system									
Testis						NA	NA	NA	NA
Enlargement		0	1	0	0				
Epididymis						NA	NA	NA	NA
Nodule, light yellow		0	0	1	0				
Endocrine system									
Pituitary						0	0	0	1
Enlargement		0	0	0	0				
Special sense organs									
Eye						0	0	0	0
Dyscoria		1	0	0	0				

Not significantly different from control.

NA: not applicable.

No appreciable changes in all other organs and tissues.

One male in the 4 mg/kg group was imminently sacrificed when moribund and one male in the 100 mg/kg group died.

Table 11 Necropsy findings
Male, Female; 52w

Sex	Organ and finding	Male				Female			
		Control	4 mg/kg	20 mg/kg	100 mg/kg	Control	4 mg/kg	20 mg/kg	100 mg/kg
	Number of animals	10	8	8	10	10	10	9	10
Digestive system									
Liver	Macule, dark red	0	0	0	1	1	1	0	0
	Enlargement	0	0	1	4	0	0	0	3
Pancreas	Mass, light gray	1	0	0	0	0	0	0	0
	Mass, light gray	0	1	0	0	0	0	0	0
Hematopoietic system									
Thymus	Small	10	8	8	10	10	10	9	10
Spleen	Enlargement	0	0	0	1	0	1	0	0
	Cyst	0	0	0	0	1	0	0	0
Urinary system									
Kidney	Rough, surface	0	1	0	0	0	0	0	0
	Dilatation, pelvic cavity	0	1	0	0	1	0	0	0
Genital system									
Testis	Softening	1	0	1	0	NA	NA	NA	NA
	Small	0	0	1	0	NA	NA	NA	NA
Uterus	Enlargement	NA	NA	NA	NA	0	1	0	0
	Cyst, endometrium					0	0	1	1
Mammary gland	Retention, milk	0	1	0	0	7	1*	3	3
Endocrine system									
Pituitary	Spot, dark red	0	0	1	1	1	1	1	0
	Mass, dark red	0	0	1	1	0	1	0	0
Thyroid	Nodule, light gray	0	0	1	0	0	0	0	0

*: P<0.05 (significantly different from control).

NA: not applicable.

No appreciable changes in all other organs and tissues.

One male in the 4 mg/kg group died and one male in the 4 mg/kg group was imminently sacrificed when moribund.

Two males and one female in the 20 mg/kg group died.

Table 11 - continued

Necropsy findings
Male, Female, 52w

Organs and findings	Sex Group and dose	Male				Female			
		Control		4 mg/kg	20 mg/kg	100 mg/kg	Control		4 mg/kg
		Number of animals	10	8	8	10	10	10	9
Endocrine system									
Adrenal									
Spot, brown		0	0	0	0	0	4	1	2
Enlargement		0	0	0	0	0	1	0	0
Nodule, brown		0	0	0	0	2	0	0	0
Integumentary system									
Integument									
Mass, subcutis, light gray		1	0	0	0	0	2	2	3
Others									
Extremity									
Swelling, hindlimb		0	0	1	0	0	0	0	1
Corn, hindlimb		4	2	2	4	2	2	1	2

Not significantly different from control.

No appreciable changes in all other organs and tissues.

One male in the 4 mg/kg group died and one male in the 4 mg/kg group was imminently sacrificed when moribund.

Two males and one female in the 20 mg/kg group died.

Table 12 Absolute and relative organ weights
Male, Female, 13w

Sex	Group and dose	Final body weight	Brain		Pituitary		Thyroids		Heart		
			(g)	(g)	(g/100 gB.W.)	(mg)	(mg/100 gB.W.)	(mg)	(mg/100 gB.W.)	(g)	(g/100 gB.W.)
Male	Control	N	10	10	10	10	10	10	10	10	10
		Mean	609.0	2.37	0.39	15.5	2.6	24.6	4.0	1.69	0.28
		S.D.	±49.7	±0.08	±0.03	±2.1	±0.3	±3.4	±0.6	±0.17	±0.02
	4 mg/kg	N	9	9	9	9	9	9	9	9	9
		Mean	582.8	2.36	0.41	14.8	2.6	20.9	3.6	1.66	0.29
		S.D.	±62.6	±0.07	±0.05	±1.8	±0.3	±5.1	±0.9	±0.17	±0.02
	20 mg/kg	N	10	10	10	10	10	10	10	10	10
		Mean	593.6	2.29	0.39	14.9	2.5	26.3	4.4	1.61	0.27
		S.D.	±42.4	±0.12	±0.03	±2.7	±0.3	±4.3	±0.7	±0.15	±0.02
	100 mg/kg	N	9	9	9	9	9	9	9	9	9
		Mean	628.5	2.33	0.37	15.0	2.4	26.4	4.2	1.67	0.27
		S.D.	±37.9	±0.07	±0.02	±2.0	±0.3	±4.5	±0.8	±0.16	±0.02
Female	Control	N	10	10	10	10	10	10	10	10	10
		Mean	316.4	2.05	0.65	17.3	5.6	16.9	5.4	1.02	0.32
		S.D.	±25.1	±0.06	±0.05	±2.7	±1.2	±2.2	±0.8	±0.10	±0.03
	4 mg/kg	N	10	10	10	10	10	10	10	10	10
		Mean	306.7	2.06	0.67	18.2	5.9	16.0	5.3	0.96	0.31
		S.D.	±17.6	±0.07	±0.03	±3.1	±0.9	±2.8	±1.0	±0.07	±0.02
	20 mg/kg	N	10	10	10	10	10	10	10	10	10
		Mean	314.6	2.10	0.67	19.2	6.1	16.8	5.4	1.03	0.33
		S.D.	±34.6	±0.07	±0.06	±3.0	±0.8	±2.5	±0.6	±0.11	±0.02
	100 mg/kg	N	10	10	10	10	10	10	10	10	10
		Mean	307.4	2.13	0.70	19.3	6.3	19.7	6.4*	0.99	0.33
		S.D.	±29.4	±0.06	±0.07	±4.0	±1.0	±3.9	±1.1	±0.09	±0.03

*: P<0.05 (significantly different from control).

One male in the 4 mg/kg group was imminently sacrificed when moribund and one male in the 100 mg/kg group died.

Table 12 - continued

Absolute and relative organ weights
Male, Female, 13w

Sex	Group and dose	Lungs		Thymus		Liver		Spleen	
		(g)	(g/100 gB.W.)	(g)	(g/100 gB.W.)	(g)	(g/100 gB.W.)	(g)	(g/100 gB.W.)
Male	Control	N	10	10	10	10	10	10	10
		Mean	1.71	0.28	0.31	0.05	16.72	2.75	0.91
		S.D.	±0.10	±0.02	±0.10	±0.02	±1.53	±0.13	±0.13
	4 mg/kg	N	9	9	9	9	9	9	9
		Mean	1.64	0.28	0.33	0.06	16.25	2.79	0.87
		S.D.	±0.15	±0.02	±0.09	±0.02	±2.42	±0.23	±0.10
	20 mg/kg	N	10	10	10	10	10	10	10
		Mean	1.63	0.28	0.30	0.05	16.94	2.85	0.81
		S.D.	±0.14	±0.03	±0.10	±0.02	±1.83	±0.21	±0.12
	100 mg/kg	N	9	9	9	9	9	9	9
		Mean	1.72	0.28	0.28	0.05	20.20**	3.21**	0.88
		S.D.	±0.10	±0.02	±0.07	±0.01	±1.76	±0.20	±0.14
Female	Control	N	10	10	10	10	10	10	10
		Mean	1.14	0.36	0.27	0.09	8.24	2.61	0.51
		S.D.	±0.07	±0.02	±0.06	±0.02	±0.81	±0.20	±0.05
	4 mg/kg	N	10	10	10	10	10	10	10
		Mean	1.19	0.39	0.27	0.09	8.42	2.75	0.50
		S.D.	±0.07	±0.03	±0.06	±0.02	±0.65	±0.19	±0.07
	20 mg/kg	N	10	10	10	10	10	10	10
		Mean	1.22	0.39	0.27	0.08	9.24	2.93**	0.55
		S.D.	±0.10	±0.04	±0.06	±0.02	±1.40	±0.21	±0.07
	100 mg/kg	N	10	10	10	10	10	10	10
		Mean	1.22	0.40*	0.28	0.09	10.51**	3.42**	0.51
		S.D.	±0.09	±0.03	±0.08	±0.03	±1.18	±0.23	±0.06

*: P<0.05, **: P<0.01 (significantly different from control).

One male in the 4 mg/kg group was imminently sacrificed when moribund and one male in the 100 mg/kg group died.

Table 12 - continued Absolute and relative organ weights
Male, Female, 13w

Sex	Group and dose	Kidneys		Adrenals		Epididymides		Testes	
		(g)	(g/100 gB.W.)	(mg)	(mg/100 gB.W.)	(g)	(g/100 gB.W.)	(g)	(g/100 gB.W.)
Male	Control	N	10	10	10	10	10	10	10
		Mean	3.63	0.60	61.5	10.1	1.36	0.23	0.59
		S.D.	±0.19	±0.05	±5.9	±1.1	±0.06	±0.03	±0.32
	4 mg/kg	N	9	9	9	9	9	9	9
		Mean	3.70	0.64	60.4	10.4	1.40	0.24	0.66
		S.D.	±0.45	±0.05	±10.8	±1.7	±0.09	±0.03	±0.62
	20 mg/kg	N	10	10	10	10	10	10	10
		Mean	3.69	0.62	58.3	9.8	1.35	0.23	0.45
		S.D.	±0.52	±0.07	±8.6	±1.2	±0.18	±0.02	±0.31
	100 mg/kg	N	9	9	9	9	9	9	9
		Mean	4.01	0.64	59.6	9.5	1.34	0.21	0.59
		S.D.	±0.55	±0.06	±4.9	±0.8	±0.13	±0.03	±0.34
Female	Control	N	10	10	10	10			
		Mean	1.88	0.60	67.0	21.3			
		S.D.	±0.15	±0.05	±7.5	±2.6			
	4 mg/kg	N	10	10	10	10			
		Mean	1.87	0.61	64.9	21.1			
		S.D.	±0.14	±0.04	±9.4	±2.6			
	20 mg/kg	N	10	10	10	10			
		Mean	2.01	0.64	66.4	21.1			
		S.D.	±0.21	±0.04	±11.2	±2.0			
	100 mg/kg	N	10	10	10	10			
		Mean	2.01	0.65*	68.7	22.4			
		S.D.	±0.19	±0.05	±9.5	±2.5			

*: P<0.05 (significantly different from control).

One male in the 4 mg/kg group was imminently sacrificed when moribund and one male in the 100 mg/kg group died.

Table 12 - continued Absolute and relative organ weights
Male, Female, 13w

Sex	Group and dose	Ovaries		Uterus	
		(mg)	(mg/100 gB. W.)	(g)	(g/100 gB. W.)
Male	Control	N			
		Mean			
		S.D.			
	4 mg/kg	N			
		Mean			
		S.D.			
	20 mg/kg	N			
		Mean			
		S.D.			
	100 mg/kg	N			
		Mean			
		S.D.			
Female	Control	N	10	10	10
		Mean	77.7	24.6	0.65
		S.D.	±10.4	±3.4	±0.15
					±0.06
	4 mg/kg	N	10	10	10
		Mean	77.7	25.4	0.72
		S.D.	±9.1	±3.0	±0.17
					±0.06
	20 mg/kg	N	10	10	10
		Mean	82.4	26.4	0.64
		S.D.	±10.2	±4.1	±0.11
					±0.03
	100 mg/kg	N	10	10	10
		Mean	81.3	26.5	0.61
		S.D.	±8.8	±2.5	±0.13
					±0.06

Not significantly different from control.

Table 13 Absolute and relative organ weights
Male, Female, 52w

Sex	Group and dose	Final body weight		Brain		Pituitary		Thyroids		Heart	
		(g)	(g)	(g/100 gB.W.)	(mg)	(mg/100 gB.W.)	(mg)	(mg/100 gB.W.)	(g)	(g/100 gB.W.)	
Male	Control	N	10	10	10	10	10	10	10	10	10
		Mean	853.9	2.52	0.30	17.3	2.0	33.1	3.9	2.05	0.24
		S.D.	±106.6	±0.13	±0.04	±3.8	±0.4	±5.2	±0.7	±0.23	±0.02
	4 mg/kg	N	8	8	8	8	8	8	8	8	8
		Mean	801.5	2.44	0.31	16.0	2.0	37.3	4.7	1.89	0.24
		S.D.	±79.6	±0.08	±0.03	±1.9	±0.2	±7.2	±1.0	±0.15	±0.01
	20 mg/kg	N	8	8	8	8	8	8	8	8	8
		Mean	846.9	2.42	0.29	25.9	3.2	34.1	4.0	1.93	0.23
		S.D.	±138.4	±0.08	±0.04	±18.1	±2.8	±10.1	±0.7	±0.24	±0.01
	100 mg/kg	N	10	10	10	10	10	10	10	10	10
		Mean	884.2	2.48	0.29	32.6	3.6	42.1*	4.8*	1.99	0.23
		S.D.	±135.7	±0.08	±0.04	±48.0	±4.9	±7.5	±0.5	±0.28	±0.02
Female	Control	N	10	10	10	10	10	10	10	10	10
		Mean	432.9	2.11	0.50	27.3	6.4	23.8	5.6	1.21	0.28
		S.D.	±77.3	±0.11	±0.08	±6.1	±1.6	±5.2	±1.2	±0.10	±0.03
	4 mg/kg	N	10	10	10	10	10	10	10	10	10
		Mean	408.3	2.10	0.52	46.8	12.2	22.2	5.4	1.18	0.29
		S.D.	±53.6	±0.10	±0.07	±47.8	±14.4	±6.2	±1.3	±0.12	±0.04
	20 mg/kg	N	9	9	9	9	9	9	9	9	9
		Mean	435.3	2.12	0.49	36.3	8.3	23.8	5.5	1.22	0.28
		S.D.	±38.5	±0.06	±0.05	±15.3	±3.4	±1.6	±0.5	±0.11	±0.02
	100 mg/kg	N	10	10	10	10	10	10	10	10	10
		Mean	452.8	2.18	0.50	32.4	7.4	26.9	6.1	1.29	0.29
		S.D.	±93.4	±0.08	±0.11	±7.8	±2.4	±3.7	±0.9	±0.18	±0.03

*: P<0.05 (significantly different from control).

One male in the 4 mg/kg group died and one male in the 4 mg/kg group was imminently sacrificed when moribund.

Two males and one female in the 20 mg/kg group died.

Table 13 - continued

Absolute and relative organ weights
Male, Female, 52w

Sex	Group and dose	Lungs		Thymus		Liver		Spleen	
		(g)	(g/100 gB.W.)	(g)	(g/100 gB.W.)	(g)	(g/100 gB.W.)	(g)	(g/100 gB.W.)
Male	Control	N	10	10	10	10	10	10	10
		Mean	1.93	0.23	0.11	0.01	20.37	2.40	1.01
		S.D.	±0.19	±0.03	±0.03	±0.00	±1.92	±0.15	±0.16
	4 mg/kg	N	8	8	8	8	8	8	8
		Mean	1.88	0.24	0.09	0.01	19.58	2.42	1.05
		S.D.	±0.13	±0.02	±0.03	±0.00	±4.28	±0.33	±0.35
	20 mg/kg	N	8	8	8	8	8	8	8
		Mean	1.94	0.23	0.09	0.01	20.56	2.42	0.97
		S.D.	±0.20	±0.02	±0.02	±0.00	±5.01	±0.34	±0.19
	100 mg/kg	N	10	10	10	10	10	10	10
		Mean	1.97	0.23	0.10	0.01	25.21*	2.86**	1.32
		S.D.	±0.18	±0.02	±0.03	±0.00	±4.20	±0.27	±0.42
Female	Control	N	10	10	10	10	10	10	10
		Mean	1.30	0.31	0.10	0.02	10.00	2.34	0.60
		S.D.	±0.08	±0.04	±0.03	±0.01	±1.17	±0.27	±0.09
	4 mg/kg	N	10	10	10	10	10	10	10
		Mean	1.32	0.33	0.08	0.02	11.09	2.73*	0.72
		S.D.	±0.09	±0.03	±0.02	±0.01	±1.61	±0.36	±0.30
	20 mg/kg	N	9	9	9	9	9	9	9
		Mean	1.36	0.31	0.10	0.02	11.77*	2.71*	0.64
		S.D.	±0.08	±0.03	±0.03	±0.00	±1.20	±0.19	±0.15
	100 mg/kg	N	10	10	10	10	10	10	10
		Mean	1.37	0.32	0.08	0.02	15.66**	3.48**	0.74
		S.D.	±0.08	±0.07	±0.02	±0.01	±3.19	±0.41	±0.21

*: P<0.05, **: P<0.01 (significantly different from control).

One male in the 4 mg/kg group died and one male in the 4 mg/kg group was imminently sacrificed when moribund.

Two males and one female in the 20 mg/kg group died.

Table 13 - continued Absolute and relative organ weights
Male, Female, 52w

Sex	Group and dose	Kidneys		Adrenals		Epididymides		Testes	
		(g)	(g/100 gB. W.)	(mg)	(mg/100 gB. W.)	(g)	(g/100 gB. W.)	(g)	(g/100 gB. W.)
Male	Control	N	10	10	10	10	10	10	10
		Mean	4.20	0.50	63.4	7.5	1.43	3.87	0.46
		S.D.	±0.38	±0.05	±7.3	±0.7	±0.18	±0.39	±0.06
	4 mg/kg	N	8	8	8	8	8	8	8
		Mean	4.10	0.51	65.7	8.2	1.43	3.87	0.49
		S.D.	±0.46	±0.03	±12.1	±0.8	±0.15	±0.33	±0.06
	20 mg/kg	N	8	8	8	8	8	8	8
		Mean	4.23	0.50	64.1	7.7	1.27	3.56	0.42
		S.D.	±0.73	±0.05	±6.1	±1.5	±0.25	±0.77	±0.08
	100 mg/kg	N	10	10	10	10	10	10	10
		Mean	4.61	0.53	68.0	7.8	1.31	3.83	0.44
		S.D.	±0.68	±0.08	±13.5	±1.4	±0.15	±0.54	±0.05
Female	Control	N	10	10	10	10			
		Mean	2.29	0.54	83.8	19.7			
		S.D.	±0.26	±0.10	±18.3	±4.5			
	4 mg/kg	N	10	10	10	10			
		Mean	2.31	0.57	80.4	19.9			
		S.D.	±0.30	±0.07	±12.6	±3.3			
	20 mg/kg	N	9	9	9	9			
		Mean	2.45	0.56	77.1	17.9			
		S.D.	±0.30	±0.06	±13.3	±3.8			
	100 mg/kg	N	10	10	10	10			
		Mean	2.75**	0.63	81.3	18.6			
		S.D.	±0.33	±0.12	±17.3	±5.5			

**: P<0.01 (significantly different from control).

One male in the 4 mg/kg group died and one male in the 4 mg/kg group was imminently sacrificed when moribund.

Two males and one female in the 20 mg/kg group died.

Table 13 - continued Absolute and relative organ weights
Male, Female, 52w

Sex	Group and dose	Ovaries		Uterus	
		(mg)	(mg/100 gB. W.)	(g)	(g/100 gB. W.)
Male	Control	N			
		Mean			
		S.D.			
	4 mg/kg	N			
		Mean			
		S.D.			
	20 mg/kg	N			
		Mean			
		S.D.			
	100 mg/kg	N			
		Mean			
		S.D.			
Female	Control	N	10	10	10
		Mean	51.4	12.2	0.95
		S.D.	±10.3	±3.1	±0.19
					±0.23
					±0.07
	4 mg/kg	N	10	10	10
		Mean	48.7	11.9	1.22
		S.D.	±12.1	±2.3	±0.43
					±0.30
					±0.11
	20 mg/kg	N	9	9	9
		Mean	52.1	12.0	1.03
		S.D.	±15.8	±4.0	±0.25
					±0.24
					±0.06
	100 mg/kg	N	10	10	10
		Mean	56.8	13.1	1.03
		S.D.	±19.5	±5.2	±0.18
					±0.24
					±0.06

Not significantly different from control.
One female in the 20 mg/kg group died.

Table 14 Histopathological findings
Male, Female, 13w

Organs and findings	Sex Group and dose	Male																
		Control				4 mg/kg				20 mg/kg								
		Number of animals			-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++
Digestive system																		
Tongue																		
Esophagus																		
Stomach																		
Duodenum																		
Jejunum																		
Ileum																		
Cecum																		
Colon																		
Rectum																		
Submaxillary gland																		
Sublingual gland																		
Parotid gland																		
Liver																		
Degeneration, hepatocyte, fatty, centrilobular		10	0	0	0	0	9	0	0	0	8	2	0	0	0	2		
Degeneration, hepatocyte, fatty, periportal		7	3	0	0	3	6	3	0	0	5	5	0	0	0	5		
Necrosis, hepatocyte, focal		10	0	0	0	0	9	0	0	0	10	0	0	0	0	0		
Hypertrophy, hepatocyte, centrilobular		10	0	0	0	0	9	0	0	0	10	0	0	0	0	0		
Cellular infiltration, mononuclear cell		10	0	0	0	0	9	0	0	0	10	0	0	0	0	0		
Fibrosis		9	1	0	0	1	9	0	0	0	10	0	0	0	0	0		
Pancreas																		
Atrophy, acinus, focal		8	2	0	0	2												
Cellular infiltration, mixed		9	1	0	0	1												
Respiratory system																		
Trachea																		
Lung																		
Metaplasia, osseous		7	3	0	0	3												
Accumulation, foam cell, alveolus		9	1	0	0	1												
Mineralization, artery		9	1	0	0	1												
Hematopoietic system																		
Thymus																		
Submaxillary lymph node																		
NR (10)																		
NR (10)																		

Not significantly different from control.

Grade sign: -, none; +, mild; ++, moderate; +++, marked.

NR: no remarkable changes.

Figures in parentheses are number of animals with tissues examined histopathologically.

One male in the 4 mg/kg group was imminently sacrificed when moribund.

Table 14 - continued Histopathological findings
Male, Female, 13w

Organs and findings	Sex	Male														
		Control				4 mg/kg				20 mg/kg						
	Number of animals	10		9		10										
		-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total
Hematopoietic system																
Mesenteric lymph node																
Accumulation, foam cell		10	0	(10)	0	0					(0)					
Spleen																
Bone marrow (sternum)																
Bone marrow (femur)																
Cardiovascular system																
Heart																
Cellular infiltration, mononuclear cell		8	2	(10)	0	2					(0)					
Fibrosis, myocardium		9	1	0	0	1					(0)					
Aorta																
Urinary system																
Kidney																
Tubule, basophilic		6	4	0	0	4					(9)					
Droplet, epithelial cell, proximal tubule, hyaline		10	0	0	0	0					8	2	(10)	0	2	
Cast, proteinaceous		10	0	0	0	0					7	3	0	0	3	
Cyst, medulla		10	0	0	0	0					10	0	0	0	0	
Cellular infiltration, mononuclear cell, pelvis		10	0	0	0	0					10	0	0	0	0	
Fibrosis, medulla		10	0	0	0	0					9	1	0	0	1	
Mineralization, cortex		9	1	0	0	1					10	0	0	0	0	
Mineralization, medulla		9	1	0	0	1					9	1	0	0	1	
Urinary bladder																
Granuloma, adventitia		10	0	(10)	0	0					(0)					
Genital system																
Testis																
Epididymis																
Prostate																
Cellular infiltration, mononuclear cell		7	3	0	0	3					(0)					
Seminal vesicle																
Ovary																
Uterus																

Not significantly different from control.

Grade sign: -, none; +, mild; ++, moderate; +++, marked.

NR: no remarkable changes.

NA: not applicable.

Figures in parentheses are number of animals with tissues examined histopathologically.

One male in the 4 mg/kg group was imminently sacrificed when moribund.

Table 14 - continued

Histopathological findings
Male, Female, 13w

Organs and findings	Sex Group and dose	Male														
		Control						4 mg/kg				20 mg/kg				
		Number of animals			10			9			10					
		-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total
Genital system																
Vagina															NA	
Degeneration, epithelium, mucous															NA	
Mammary gland															NA	
Endocrine system																
Pituitary																
Cyst, anterior lobe		10	0	(10)	0	0					(0)				(0)	
Thyroid																
Remnant, ultimobranchial body		9	1	0	0	1					(0)				(0)	
Parathyroid																
Adrenal																
Hypertrophy, cortical cell, focal		9	1	0	0	1					(0)				(0)	
Nervous system																
Cerebrum																
Cerebellum																
Medulla oblongata																
Spinal cord																
Optic nerve																
Sciatic nerve																
Special sense organs																
Eye																
Dysplasia, retina		9	1	(10)	0	1					(0)				(0)	
Harderian gland																
Musculoskeletal system																
M. biceps femoris																
Sternum																
Femur																
Integumentary system																
Integument																

Not significantly different from control.

Grade sign: -, none; +, mild; ++, moderate; +++, marked.

NR: no remarkable changes.

NA: not applicable.

Figures in parentheses are number of animals with tissues examined histopathologically.

One male in the 4 mg/kg group was imminently sacrificed when moribund.

Table 14 - continued

Histopathological findings
Male, Female, 13w

Organs and findings	Sex	Male										Female									
		100 mg/kg					Control					4 mg/kg									
	Number of animals	9					10					10									
		-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total
Digestive system																					
Tongue																					
Esophagus																					
Stomach																					
Duodenum																					
Jejunum																					
Ileum																					
Cecum																					
Colon																					
Rectum																					
Submaxillary gland																					
Sublingual gland																					
Parotid gland																					
Liver																					
Degeneration, hepatocyte, fatty, centrilobular		9	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0
Degeneration, hepatocyte, fatty, periportal		6	3	0	0	3	9	1	0	0	0	1	9	1	0	0	0	1	0	0	1
Necrosis, hepatocyte, focal		9	0	0	0	0	10	0	0	0	0	0	9	1	0	0	0	1	0	0	1
Hyper trophy, hepatocyte, centrilobular		7	2	0	0	2	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0
Cellular infiltration, mononuclear cell		9	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0
Fibrosis		9	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0
Pancreas																					
Atrophy, acinus, focal		9	0	0	0	0	9	1	0	0	0	1									
Cellular infiltration, mixed		9	0	0	0	0	10	0	0	0	0	0									
Respiratory system																					
Trachea																					
Lung																					
Metaplasia, osseous		7	2	0	0	2	10	0	0	0	0	0									
Accumulation, foam cell, alveolus		8	1	0	0	1	10	0	0	0	0	0									
Mineralization, artery		5	4	0	0	4	8	2	0	0	0	2									
Hematopoietic system																					
Thymus																					
Submaxillary lymph node																					

Not significantly different from control.

Grade sign: -, none; +, mild; ++, moderate; +++, marked.

NR: no remarkable changes.

Figures in parentheses are number of animals with tissues examined histopathologically.

One male in the 100 mg/kg group died.

Table 14 - continued

Histopathological findings
Male, Female, 13w

Organs and findings	Sex	Male										Female										
		100 mg/kg					Control					4 mg/kg										
	Number of animals	9					10					10										
		-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total	
Hematopoietic system																						
Mesenteric lymph node																						
Accumulation, foam cell		7	2	(9)	0	0	2	10	0	0	(10)	0	0	0	0	0	(0)					
Spleen												NR(9)					NR(10)					(0)
Bone marrow (sternum)												NR(9)					NR(10)					(0)
Bone marrow (femur)												NR(9)					NR(10)					(0)
Cardiovascular system																						
Heart												(9)	0	0	0	0	(10)	0	0	0	0	(0)
Cellular infiltration, mononuclear cell		5	4	0	0	0	4	10	0	0	0	0	0	0	0	0	0	0	0	0	(0)	
Fibrosis, myocardium		7	2	0	0	0	2	10	0	0	0	0	0	0	0	0	NR(10)	0	0	0	0	(0)
Aorta												NR(9)										
Urinary system																						
Kidney												(9)	0	0	0	0	(10)	0	0	0	0	(10)
Tubule, basophilic		5	4	0	0	0	4	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0
Droplet, epithelial cell, proximal tubule, hyaline		4	5	0	0	0	5**	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0
Cast, proteinaceous		9	0	0	0	0	0	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0
Cyst, medulla		9	0	0	0	0	0	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0
Cellular infiltration, mononuclear cell, pelvis		8	1	0	0	0	1	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0
Fibrosis, medulla		9	0	0	0	0	0	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0
Mineralization, cortex		6	3	0	0	0	3	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0
Mineralization, medulla		9	0	0	0	0	0	10	0	0	0	0	0	0	0	0	9	1	0	0	0	1
Urinary bladder												(9)	0	0	0	0	(10)	0	0	0	0	(0)
Granuloma, adventitia		9	0	0	0	0	0	9	1	0	0	0	0	0	0	0	1					
Genital system																						
Testis												NR(9)					NA					NA
Epididymis												NR(9)					NA					NA
Prostate												(9)					NA					NA
Cellular infiltration, mononuclear cell		7	2	0	0	0	2															
Seminal vesicle												NR(9)					NA					NA
Ovary												NA					NR(10)					(0)
Uterus												NA					NR(10)					(0)

**: P<0.01 (significantly different from control).

Grade sign: -, none; +, mild; ++, moderate; +++, marked.

NR: no remarkable changes.

NA: not applicable.

Figures in parentheses are number of animals with tissues examined histopathologically.

One male in the 100 mg/kg group died.

Table 14 - continued

Histopathological findings
Male, Female, 13w

Organs and findings	Sex	Male										Female										
		100 mg/kg					Control					4 mg/kg										
	Number of animals		9				10				10											
	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total		
Genital system																						
Vagina																					(0)	
Degeneration, epithelium, mucous																						
Mammary gland																					(0)	
Endocrine system																						
Pituitary																						
Cyst, anterior lobe	9	0	(9)	0	0	10	0	0	0	(10)	0	0	0	0	0	0	0	0	0	0	(0)	
Thyroid																						
Remnant, ultimobranchial body	6	3	0	0	3	6	4	0	0	(10)	0	0	0	4	0	0	0	0	0	0	(0)	
Parathyroid																						
Adrenal																						
Hyper trophy, cortical cell, focal	9	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(0)	
Nervous system																						
Cerebrum																						
Cerebellum																						
Medulla oblongata																						
Spinal cord																						
Optic nerve																						
Sciatic nerve																						
Special sense organs																						
Eye																						
Dysplasia, retina	9	0	(9)	0	0	10	0	0	0	(10)	0	0	0	0	0	0	0	0	0	0	(0)	
Harderian gland																						
Musculoskeletal system																						
M. biceps femoris																						
Sternum																						
Femur																						
Integumentary system																						
Integument																						

Not significantly different from control.

Grade sign: -, none; +, mild; ++, moderate; +++, marked.

NR: no remarkable changes.

NA: not applicable.

Figures in parentheses are number of animals with tissues examined histopathologically.

One male in the 100 mg/kg group died.

Table 14 - continued

Histopathological findings
Male, Female, 13w

Organs and findings	Sex	Female									
		20 mg/kg					100 mg/kg				
	Number of animals	10		10							
		-	+	++	+++	Total	-	+	++	+++	Total
Digestive system											
Tongue		(0)									NR(10)
Esophagus		(0)									NR(10)
Stomach		(0)									NR(10)
Duodenum		(0)									NR(10)
Jejunum		(0)									NR(10)
Ileum		(0)									NR(10)
Cecum		(0)									NR(10)
Colon		(0)									NR(10)
Rectum		(0)									NR(10)
Submaxillary gland		(0)									NR(10)
Sublingual gland		(0)									NR(10)
Parotid gland		(0)									NR(10)
Liver											
Degeneration, hepatocyte, fatty, centrilobular	10	0	0	0	0	10	0	0	0	0	0
Degeneration, hepatocyte, fatty, periportal	8	2	0	0	2	6	4	0	0	0	4
Necrosis, hepatocyte, focal	9	1	0	0	1	10	0	0	0	0	0
Hyper trophy, hepatocyte, centrilobular	8	2	0	0	2	1	8	1	0	0	9**
Cellular infiltration, mononuclear cell	9	1	0	0	1	10	0	0	0	0	0
Fibrosis	10	0	0	0	0	10	0	0	0	0	0
Pancreas											
Atrophy, acinus, focal							10	0	0	0	0
Cellular infiltration, mixed							10	0	0	0	0
Respiratory system											
Trachea		(0)									NR(10)
Lung		(0)									(10)
Metaplasia, osseous							10	0	0	0	0
Accumulation, foam cell, alveolus							10	0	0	0	0
Mineralization, artery							8	2	0	0	2
Hematopoietic system											
Thymus		(0)									NR(10)
Submaxillary lymph node		(0)									NR(10)

**: P<0.01 (significantly different from control).

Grade sign: -, none; +, mild; ++, moderate; +++, marked.

NR: no remarkable changes.

Figures in parentheses are number of animals with tissues examined histopathologically.

Table 14 ~ continued

Histopathological findings
Male, Female, 13w

Organs and findings	Sex Group and dose Number of animals	Female									
		20 mg/kg					100 mg/kg				
		-	+	++	+++	Total	-	+	++	+++	Total
Hematopoietic system											
Mesenteric lymph node		10	0	(0)	0	0	9	1	0	(0)	1
Accumulation, foam cell											
Spleen				(0)						NR(10)	
Bone marrow (sternum)				(0)						NR(10)	
Bone marrow (femur)				(0)						NR(10)	
Cardiovascular system											
Heart				(0)						(10)	
Cellular infiltration, mononuclear cell							10	0	0	0	0
Fibrosis, myocardium							10	0	0	0	0
Aorta				(0)						NR(10)	
Urinary system											
Kidney				(0)						(10)	
Tubule, basophilic		10	0	0	0	0	8	2	0	0	2
Droplet, epithelial cell, proximal tubule, hyaline		10	0	0	0	0	10	0	0	0	0
Cast, proteinaceous		10	0	0	0	0	9	1	0	0	1
Cyst, medulla		10	0	0	0	0	10	0	0	0	0
Cellular infiltration, mononuclear cell, pelvis		10	0	0	0	0	10	0	0	0	0
Fibrosis, medulla		10	0	0	0	0	10	0	0	0	0
Mineralization, cortex		10	0	0	0	0	10	0	0	0	0
Mineralization, medulla		8	2	0	0	2	10	0	0	0	0
Urinary bladder				(0)						(10)	
Granuloma, adventitia							10	0	0	0	0
Genital system											
Testis					NA					NA	
Epididymis					NA					NA	
Prostate					NA					NA	
Cellular infiltration, mononuclear cell											
Seminal vesicle					NA					NA	
Ovary					(0)					NR(10)	
Uterus					(0)					NR(10)	

Not significantly different from control.

Grade sign: -, none; +, mild; ++, moderate; +++, marked.

NR: no remarkable changes.

NA: not applicable.

Figures in parentheses are number of animals with tissues examined histopathologically.

Table 14 - continued

Histopathological findings
Male, Female, 13w

Organs and findings	Sex	Female									
		20 mg/kg					100 mg/kg				
	Number of animals		10			10					
		-	+	++	+++	Total	-	+	++	+++	Total
Genital system											
Vagina		(0)									
Degeneration, epithelium, mucous							9	1	0	0	1
Mammary gland		(0)									NR(10)
Endocrine system											
Pituitary		(0)									
Cyst, anterior lobe							9	1	0	0	1
Thyroid		(0)									(10)
Remnant, ultimobranchial body							9	1	0	0	1
Parathyroid		(0)									NR(10)
Adrenal		(0)									(10)
Hypertrophy, cortical cell, focal							10	0	0	0	0
Nervous system											
Cerebrum		(0)									NR(10)
Cerebellum		(0)									NR(10)
Medulla oblongata		(0)									NR(10)
Spinal cord		(0)									NR(10)
Optic nerve		(0)									NR(10)
Sciatic nerve		(0)									NR(10)
Special sense organs											
Eye		(0)									
Dysplasia, retina							10	0	0	0	0
Harderian gland		(0)									NR(10)
Musculoskeletal system											
M. biceps femoris		(0)									NR(10)
Sternum		(0)									NR(10)
Femur		(0)									NR(10)
Integumentary system											
Integument		(0)									NR(10)

Not significantly different from control.

Grade sign: -, none; +, mild; ++, moderate; +++, marked.

NR: no remarkable changes.

Figures in parentheses are number of animals with tissues examined histopathologically.

Table 15 Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Group and dose	Male														
			Control				4 mg/kg				20 mg/kg						
	Number of animals		10		8		8		-		+		++		+++		Total
	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total		
Digestive system																	
Tongue					NR(10)					(0)						(0)	
Esophagus					NR(10)					(0)						(0)	
Stomach					(10)					(0)						(0)	
Dilatation, glandular space, glandular stomach	5	5	0	0	5					(0)						(0)	
Duodenum					(10)					(0)						(8)	
Accumulation, foam cell, lamina propria	10	0	0	0	0					(0)						0	
Jejunum					(10)					(0)						(8)	
Accumulation, foam cell, lamina propria	10	0	0	0	0					(0)						0	
Ileum					(10)					(0)						(8)	
Accumulation, foam cell, lamina propria	10	0	0	0	0					(0)						0	
Accumulation, foam cell, peyer's patch	10	0	0	0	0					(0)						0	
Cecum					NR(10)					(0)						(0)	
Colon					NR(10)					(0)						(0)	
Rectum					NR(10)					(0)						(0)	
Submaxillary gland					NR(10)					(0)						(0)	
Sublingual gland					NR(10)					(0)						(0)	
Parotid gland					NR(10)					(0)						(0)	
Liver					(10)					(8)						(8)	
Degeneration, hepatocyte, fatty, centrilobular	9	1	0	0	1	7	1	0	0	1	8	0	0	0	0	0	
Degeneration, hepatocyte, fatty, periportal	4	5	1	0	6	7	1	0	0	1*	4	3	1	0	0	4	
Necrosis, hepatocyte, focal	10	0	0	0	0	5	2	1	0	3*	8	0	0	0	0	0	
Hypertrophy, hepatocyte, centrilobular	10	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	
Hyperplasia, bile duct	9	1	0	0	1	8	0	0	0	0	5	2	0	0	0	2	
Hematopoiesis, extramedullary	10	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	
Focus, altered cell, basophilic	10	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	
Focus, altered cell, clear	10	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	
Angiectasis	10	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	
Hemorrhage	10	0	0	0	0	8	0	0	0	0	5	3	0	0	0	3	
Cellular infiltration, mononuclear cell	8	2	0	0	2	8	0	0	0	0	6	2	0	0	0	2	
Accumulation, foam cell, sinusoid ^a	10	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	
Cholangionoma	9	1	0	0	1	8	0	0	0	0	8	0	0	0	0	0	

*: P<0.05 (significantly different from control).

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

a) with lymphocyte infiltration.

Figures in parentheses are number of animals with tissues examined histopathologically.

One male in the 4 mg/kg group died and one male in the 4 mg/kg group was imminently sacrificed when moribund.

Two males in the 20 mg/kg group died.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex Group and dose Number of animals	Male													
		Control						4 mg/kg				20 mg/kg			
		-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++
Digestive system															
Pancreas															
Atrophy, acinus, focal		10	0	0	(10)	0					(0)				(0)
Hyperplasia, acinar cell, focal		8	2	0	0	0					2				
Focus, acinar cell, basophilic		8	2	0	0	0					2				
Metaplasia, hepatocyte		10	0	0	0	0					0				
Hemorrhage		9	1	0	0	0					1				
Polyarteritis		10	0	0	0	0					0				
Respiratory system															
Trachea															
Lung															
Metaplasia, osseous		8	2	0	0	0					2				
Accumulation, foam cell, alveolus		9	1	0	0	0					1				
Mineralization, artery		6	4	0	0	0					4				
Hematopoietic system															
Thymus															
Atrophy		0	7	3	0	10					(0)				(0)
Submaxillary lymph node															
Mesenteric lymph node															
Accumulation, foam cell		10	0	0	0	0		8	0	(8)	0	0	3	5	(8)
Spleen															
Hematopoiesis, extramedullary		10	0	0	0	0		8	0	0	0	8	0	0	0
Cyst, capsule		10	0	0	0	0		8	0	0	0	8	0	0	0
Accumulation, foam cell, white pulp		10	0	0	0	0		8	0	0	0	7	1	0	1
Accumulation, foam cell, red pulp		10	0	0	0	0		8	0	0	0	7	1	0	1
Bone marrow (sternum)															
Bone marrow (femur)															
Cardiovascular system															
Heart															
Cellular infiltration, mononuclear cell		4	6	0	0	6					(0)				(0)
Fibrosis, myocardium		5	5	0	0	5					(0)				(0)

**: P<0.01 (significantly different from control).

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

Figures in parentheses are number of animals with tissues examined histopathologically.

One male in the 4 mg/kg group died and one male in the 4 mg/kg group was imminently sacrificed when moribund.

Two males in the 20 mg/kg group died.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Male														
		Control				4 mg/kg				20 mg/kg						
	Number of animals	10				8				8						
		-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total
Cardiovascular system																
Aorta		NR(10)				(0)				(0)						
Urinary system																
Kidney						(10)				(8)						
Hyperplasia, transitional epithelium, pelvis		9	1	0	0	1	6	2	0	0	2	8	0	0	0	
Tubule, basophilic		5	4	1	0	5	3	4	1	0	5	3	5	0	0	
Karyomegaly, epithelial cell, proximal tubule		10	0	0	0	0	8	0	0	0	0	8	0	0	0	
Droplet, epithelial cell, proximal tubule, hyaline		10	0	0	0	0	8	0	0	0	0	8	0	0	0	
Cast, proteinaceous		8	2	0	0	2	6	2	0	0	2	4	4	0	0	
Dilatation, distal tubule		10	0	0	0	0	8	0	0	0	0	8	0	0	0	
Dilatation, pelvic cavity		10	0	0	0	0	8	0	0	0	0	8	0	0	0	
Cyst, medulla		10	0	0	0	0	8	0	0	0	0	8	0	0	0	
Hemorrhage, pelvis		10	0	0	0	0	8	0	0	0	0	8	0	0	0	
Cellular infiltration, mononuclear cell, pelvis		9	1	0	0	1	5	3	0	0	3	5	3	0	0	
Cellular infiltration, mononuclear cell, cortex		9	1	0	0	1	6	2	0	0	2	7	1	0	0	
Cellular exudation, pelvic cavity, neutrophil		9	1	0	0	1	6	2	0	0	2	5	3	0	0	
Mineralization, pelvis		9	1	0	0	1	8	0	0	0	0	8	0	0	0	
Mineralization, cortex		10	0	0	0	0	7	1	0	0	1	4	4	0	0	
Mineralization, medulla		10	0	0	0	0	8	0	0	0	0	7	1	0	0	
Urinary bladder		NR(10)				(0)				(0)						
Genital system																
Testis						(10)				(0)						
Atrophy, seminiferous tubule		9	0	0	1	1	(0)				(0)					
Edema, interstitium		9	0	0	1	1	(0)				(0)					
Epididymis						(10)				(0)						
Decrease, sperm, lumen		9	0	1	0	1	(0)				(0)					
Prostate						(10)				(0)						
Cellular infiltration, mononuclear cell		9	1	0	0	1	(0)				(0)					
Fibrosis, interstitium		10	0	0	0	0	(0)				(0)					
Seminal vesicle						NR(10)				(0)						
Ovary						NA				(0)						

*: P<0.05 (significantly different from control).

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

NA: not applicable.

Figures in parentheses are number of animals with tissues examined histopathologically.

One male in the 4 mg/kg group died and one male in the 4 mg/kg group was imminently sacrificed when moribund.

Two males in the 20 mg/kg group died.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Group and dose	Male											
			Control				4 mg/kg				20 mg/kg			
	Number of animals			10		8		8		8			8	
	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++
Genital system														
Uterus														
Metaplasia, epithelial cell, gland, squamous														
Cyst, endometrium														
Vagina														
Degeneration, epithelium, mucous														
Mammary gland					(10)									
Ectasia, alveolus/duct	10	0	0	0	0									
Adenoma	10	0	0	0	0									
Endocrine system														
Pituitary														
Hyperplasia, anterior lobe, focal	9	1	0	0	1									
Cyst, anterior lobe	10	0	0	0	0									
Hemorrhage, Rathke's pouch	10	0	0	0	0									
Gliosis, posterior lobe	9	1	0	0	1									
Ectopic tissue, posterior lobe	10	0	0	0	0									
Adenoma, anterior lobe	10	0	0	0	0									
Thyroid														
Hyperplasia, C cell, focal	9	1	0	0	1									
Remnant, ultimobranchial body	8	2	0	0	2									
Parathyroid						NR(10)								
Adrenal						(10)								
Hypertrophy, cortical cell, focal	9	1	0	0	1									
Hyperplasia, cortical cell, focal	10	0	0	0	0									
Angiectasis	10	0	0	0	0									
Nervous system														
Cerebrum						NR(10)								
Cerebellum						NR(10)								
Medulla oblongata						NR(10)								
Spinal cord						NR(10)								
Optic nerve						NR(10)								
Sciatic nerve						NR(10)								

Not significantly different from control.

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

NA: not applicable.

Figures in parentheses are number of animals with tissues examined histopathologically.

One male in the 4 mg/kg group died and one male in the 4 mg/kg group was imminently sacrificed when moribund.

Two males in the 20 mg/kg group died.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Male																
		Control				4 mg/kg				20 mg/kg								
	Number of animals		10		8		8		-		+		++		+++		Total	
	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total			
Special sense organs																		
Eye																		
Atrophy, retina, focal	10	0	0	(10)	0					(0)					(0)			
Dysplasia, retina	10	0	0	0	0													
Mineralization, cornea	10	0	0	0	0													
Harderian gland						NR(10)				(0)					(0)			
Musculoskeletal system																		
M. biceps femoris						NR(10)				(0)					(0)			
Sternum						NR(10)				(0)					(0)			
Femur						NR(10)				(0)					(0)			
Integumentary system																		
Integument																		
Cellular infiltration, mononuclear cell, subcutis	10	0	0	(10)	0					(0)					(0)			
Keratoacanthoma	9	1	0	0	1													
Others																		
Extremity																		
Formation, callus, hindlimb	4	0	0	(4)	0					(0)					(0)			
Ulcer, hindlimb	0	4	0	0	4													

Not significantly different from control.

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

Figures in parentheses are number of animals with tissues examined histopathologically.

One male in the 4 mg/kg group died and one male in the 4 mg/kg group was imminently sacrificed when moribund.

Two males in the 20 mg/kg group died.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Group and dose	Male						Female						
			100 mg/kg			Control			4 mg/kg			10			
	Number of animals		10		10		10		10		10		10		
	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total
Digestive system															
Tongue					NR(10)					NR(10)					(0)
Esophagus					NR(10)					NR(10)					(0)
Stomach					(10)					(10)					(0)
Dilatation, glandular space, glandular stomach	7	3	0	0	3	8	2	0	0	2					
Duodenum					(10)					(10)					(0)
Accumulation, foam cell, lamina propria	9	1	0	0	1	10	0	0	0	0					
Jejunum					(10)					(10)					(0)
Accumulation, foam cell, lamina propria	2	8	0	0	8**	10	0	0	0	0					
Ileum					(10)					(10)					(0)
Accumulation, foam cell, lamina propria	4	6	0	0	6**	10	0	0	0	0					
Accumulation, foam cell, peyer's patch	7	3	0	0	3	10	0	0	0	0					
Cecum					NR(10)					NR(10)					(0)
Colon					NR(10)					NR(10)					(0)
Rectum					NR(10)					NR(10)					(0)
Submaxillary gland					NR(10)					NR(10)					(0)
Sublingual gland					NR(10)					NR(10)					(0)
Parotid gland					NR(10)					NR(10)					(0)
Liver					(10)					(10)					(10)
Degeneration, hepatocyte; fatty, centrilobular	10	0	0	0	0	10	0	0	0	0	10	0	0	0	0
Degeneration, hepatocyte, fatty, periportal	5	3	2	0	5	7	3	0	0	3	9	1	0	0	1
Necrosis, hepatocyte, focal	8	2	0	0	2	9	1	0	0	1	9	1	0	0	1
Hypertrophy, hepatocyte, centrilobular	8	2	0	0	2	10	0	0	0	0	10	0	0	0	0
Hyperplasia, bile duct	3	5	2	0	7**	9	1	0	0	1	10	0	0	0	0
Hematopoiesis, extramedullary	10	0	0	0	0	10	0	0	0	0	9	1	0	0	1
Focus, altered cell, basophilic	10	0	0	0	0	9	1	0	0	1	9	1	0	0	1
Focus, altered cell, clear	9	1	0	0	1	10	0	0	0	0	10	0	0	0	0
Angiectasis	9	1	0	0	1	9	1	0	0	1	10	0	0	0	0
Hemorrhage	10	0	0	0	0	10	0	0	0	0	8	2	0	0	2
Cellular infiltration, mononuclear cell	10	0	0	0	0	10	0	0	0	0	10	0	0	0	0
Accumulation, foam cell, sinusoid ^{a)}	0	2	8	0	10**	10	0	0	0	0	10	0	0	0	0
Cholangiomata	10	0	0	0	0	10	0	0	0	0	10	0	0	0	0

**: P<0.01 (significantly different from control).

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

a) with lymphocyte infiltration.

Figures in parentheses are number of animals with tissues examined histopathologically.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Male										Female										
		100 mg/kg					Control					4 mg/kg										
	Number of animals		10					10					10									
	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total		
Digestive system																						
Pancreas																						
Atrophy, acinus, focal	9	1	0	0	1	7	3	0	0	3	(0)											
Hyperplasia, acinar cell, focal	9	1	0	0	1	10	0	0	0	0	(0)											
Focus, acinar cell, basophilic	10	0	0	0	0	10	0	0	0	0	(0)											
Metaplasia, hepatocyte	9	1	0	0	1	10	0	0	0	0	(0)											
Hemorrhage	10	0	0	0	0	10	0	0	0	0	(0)											
Polyarteritis	10	0	0	0	0	9	1	0	0	1	(0)											
Respiratory system																						
Trachea						NR(10)																
Lung						(10)																
Metaplasia, osseous	10	0	0	0	0	10	0	0	0	0	(0)											
Accumulation, foam cell, alveolus	8	2	0	0	2	9	1	0	0	1	(0)											
Mineralization, artery	8	2	0	0	2	10	0	0	0	0	(0)											
Hematopoietic system																						
Thymus						(10)																
Atrophy	0	6	4	0	10	1	8	1	0	9	(0)											
Submaxillary lymph node						NR(10)																
Mesenteric lymph node						(10)																
Accumulation, foam cell	0	3	6	1	10**	10	0	0	0	0	(0)											
Spleen						(10)																
Hematopoiesis, extramedullary	10	0	0	0	0	10	0	0	0	0	(0)											
Cyst, capsule	10	0	0	0	0	9	1	0	0	1	(0)											
Accumulation, foam cell, white pulp	6	3	1	0	4*	10	0	0	0	0	(0)											
Accumulation, foam cell, red pulp	6	3	1	0	4*	10	0	0	0	0	(0)											
Bone marrow (sternum)						NR(10)												(0)				
Bone marrow (femur)						NR(10)												(0)				
Cardiovascular system																						
Heart						(10)																
Cellular infiltration, mononuclear cell	5	5	0	0	5	9	1	0	0	1	(0)											
Fibrosis, myocardium	5	4	1	0	5	10	0	0	0	0	(0)											

*: P<0.05, **: P<0.01 (significantly different from control).

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

Figures in parentheses are number of animals with tissues examined histopathologically.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Male										Female																							
		100 mg/kg					Control					4 mg/kg																							
	Number of animals		10				10				10																								
	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total															
Cardiovascular system																																			
Aorta																																			
Urinary system																																			
Kidney																																			
Hyperplasia, transitional epithelium, pelvis		10	0	0	0	0	9	1	0	0	1	8	2	0	0	0	2																		
Tubule, basophilic		1	7	2	0	9	10	0	0	0	0	7	3	0	0	0	3																		
Karyomegaly, epithelial cell, proximal tubule		9	1	0	0	1	10	0	0	0	0	10	0	0	0	0	0																		
Droplet, epithelial cell, proximal tubule, hyaline		7	3	0	0	3	10	0	0	0	0	10	0	0	0	0	0																		
Cast, proteinaceous		7	3	0	0	3	9	1	0	0	1	8	2	0	0	0	2																		
Dilatation, distal tubule		10	0	0	0	0	10	0	0	0	0	10	0	0	0	0	0																		
Dilatation, pelvic cavity		10	0	0	0	0	9	1	0	0	1	10	0	0	0	0	0																		
Cyst, medulla		10	0	0	0	0	9	1	0	0	1	10	0	0	0	0	0																		
Hemorrhage, pelvis		10	0	0	0	0	10	0	0	0	0	10	0	0	0	0	0																		
Cellular infiltration, mononuclear cell, pelvis		10	0	0	0	0	9	1	0	0	1	10	0	0	0	0	0																		
Cellular infiltration, mononuclear cell, cortex		10	0	0	0	0	10	0	0	0	0	10	0	0	0	0	0																		
Cellular exudation, pelvic cavity, neutrophil		10	0	0	0	0	9	1	0	0	1	10	0	0	0	0	0																		
Mineralization, pelvis		10	0	0	0	0	10	0	0	0	0	8	2	0	0	0	2																		
Mineralization, cortex		8	2	0	0	2	10	0	0	0	0	10	0	0	0	0	0																		
Mineralization, medulla		10	0	0	0	0	8	2	0	0	2	6	4	0	0	0	4																		
Urinary bladder		NR(10)					NR(10)					(0)																							
Genital system																																			
Testis																																			
Atrophy, seminiferous tubule		10	0	0	0	0	0					NA					NA																		
Edema, interstitium		10	0	0	0	0	0					NA					NA																		
Epididymis																																			
Decrease, sperm, lumen		10	0	0	0	0	0					NA					NA																		
Prostate																																			
Cellular infiltration, mononuclear cell		9	1	0	0	1						NA					NA																		
Fibrosis, interstitium		9	1	0	0	1						NA					(0)																		
Seminal vesicle																																			
Ovary																																			

Not significantly different from control.

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

NA: not applicable.

Figures in parentheses are number of animals with tissues examined histopathologically.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Male										Female										
		100 mg/kg					Control					4 mg/kg										
	Number of animals		10				10				10											
		-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total	-	+	++	+++	Total	
Genital system																						
Uterus																						
Metaplasia, epithelial cell, gland, squamous																						
Cyst, endometrium																						
Vagina																						
Degeneration, epithelium, mucous																						
Mammary gland																						
Ectasia, alveolus/duct		9	1	0	0	1		2	2	6	8											
Adenoma		10	0	0	0	0		10	0	0	0											
Endocrine system																						
Pituitary																						
Hyperplasia, anterior lobe, focal		9	1	0	0	1		8	2	0	0											
Cyst, anterior lobe		9	1	0	0	1		10	0	0	0											
Hemorrhage, Rathke's pouch		10	0	0	0	0		9	1	0	0											
Gliosis, posterior lobe		10	0	0	0	0		10	0	0	0											
Ectopic tissue, posterior lobe		10	0	0	0	0		10	0	0	0											
Adenoma, anterior lobe		9	1	0	0	1		10	0	0	0											
Thyroid																						
Hyperplasia, C cell, focal		10	0	0	0	0		10	0	0	0											
Remnant, ultimobranchial body		10	0	0	0	0		8	2	0	0											
Parathyroid																						
Adrenal																						
Hyperplasia, cortical cell, focal		10	0	0	0	0		10	0	0	0											
Hyperplasia, cortical cell, focal		9	1	0	0	1		4	6	0	0											
Angiectasis		10	0	0	0	0		3	7	0	0											
Nervous system																						
Cerebrum																						
Cerebellum																						
Medulla oblongata																						
Spinal cord																						
Optic nerve																						
Sciatic nerve																						

Not significantly different from control.

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

NA: not applicable.

Figures in parentheses are number of animals with tissues examined histopathologically.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Male					Female				
		100 mg/kg					Control				
	Group and dose	Number of animals					4 mg/kg				
		-	+	++	+++	Total	-	+	++	+++	Total
Special sense organs											
Eye											
Atrophy, retina, focal		10	0	0	0	0	10	0	0	0	0
Dysplasia, retina		10	0	0	0	0	10	0	0	0	0
Mineralization, cornea		9	1	0	0	1	10	0	0	0	0
Harderian gland						NR(10)			NR(10)		(0)
Musculoskeletal system											
M. biceps femoris						NR(10)			NR(10)		(0)
Sternum						NR(10)			NR(10)		(0)
Femur						NR(10)			NR(10)		(0)
Integumentary system											
Integument											
Cellular infiltration, mononuclear cell, subcutis		9	1	0	0	1	10	0	0	0	0
Keratoacanthoma		10	0	0	0	0	10	0	0	0	0
Others											
Extremity											
Formation, callus, hindlimb		4	0	0	0	0	2	0	0	0	0
Ulcer, hindlimb		0	4	0	0	4	0	2	0	0	2

Not significantly different from control.

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

Figures in parentheses are number of animals with tissues examined histopathologically.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Female									
		20 mg/kg					100 mg/kg				
	Number of animals	9		10							
		-	+	++	+++	Total	-	+	++	+++	Total
Digestive system											
Tongue		(0)									
Esophagus		(0)									
Stomach		(0)									
Dilatation, glandular space, glandular stomach							7	3	0	0	3
Duodenum		(9)									
Accumulation, foam cell, lamina propria	9	0	0	0	0	9	1	0	0	0	1
Jejunum		(9)									
Accumulation, foam cell, lamina propria	9	0	0	0	0	4	6	0	0	0	6**
Ileum		(9)									
Accumulation, foam cell, lamina propria	9	0	0	0	0	9	1	0	0	0	1
Accumulation, foam cell, peyer's patch	9	0	0	0	0	9	1	0	0	0	1
Cecum		(0)									
Colon		(0)									
Rectum		(0)									
Submaxillary gland		(0)									
Sublingual gland		(0)									
Parotid gland		(0)									
Liver		(9)									
Degeneration, hepatocyte, fatty, centrilobular	9	0	0	0	0	10	0	0	0	0	0
Degeneration, hepatocyte, fatty, periportal	7	2	0	0	0	2	3	3	4	0	7*
Necrosis, hepatocyte, focal	9	0	0	0	0	0	10	0	0	0	0
Hyper trophy, hepatocyte, centrilobular	5	4	0	0	0	4*	0	0	10	0	10**
Hyperplasia, bile duct	7	2	0	0	0	2	9	1	0	0	1
Hematopoiesis, extramedullary	9	0	0	0	0	0	10	0	0	0	0
Focus, altered cell, basophilic	9	0	0	0	0	0	10	0	0	0	0
Focus, altered cell, clear	9	0	0	0	0	0	10	0	0	0	0
Angiectasis	9	0	0	0	0	0	10	0	0	0	0
Hemorrhage	9	0	0	0	0	0	10	0	0	0	0
Cellular infiltration, mononuclear cell	9	0	0	0	0	0	10	0	0	0	0
Accumulation, foam cell, sinusoid ^a	8	1	0	0	0	1	1	1	2	0	9**
Cholangioma	9	0	0	0	0	0	10	0	0	0	0

*: P<0.05, **: P<0.01 (significantly different from control).

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

a) with lymphocyte infiltration.

Figures in parentheses are number of animals with tissues examined histopathologically.

One female in the 20 mg/kg group died.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex Group and dose	Female									
		20 mg/kg					100 mg/kg				
		Number of animals		9			10				
		-	+	++	+++	Total	-	+	++	+++	Total
Digestive system											
Pancreas						(0)					
Atrophy, acinus, focal							10	0	0	0	0
Hyperplasia, acinar cell, focal							10	0	0	0	0
Focus, acinar cell, basophilic							10	0	0	0	0
Metaplasia, hepatocyte							10	0	0	0	0
Hemorrhage							10	0	0	0	0
Polyarteritis							10	0	0	0	0
Respiratory system											
Trachea						(0)					
Lung						(0)					
Metaplasia, osseous							10	0	0	0	0
Accumulation, foam cell, alveolus							10	0	0	0	0
Mineralization, artery							9	1	0	0	1
Hematopoietic system											
Thymus						(0)					
Atrophy							0	8	2	0	10
Submaxillary lymph node						(0)					
Mesenteric lymph node						(9)					
Accumulation, foam cell		6	3	0	0	3	0	4	6	0	10**
Spleen						(9)					
Hematopoiesis, extramedullary		8	1	0	0	1	10	0	0	0	0
Cyst, capsule		9	0	0	0	0	10	0	0	0	0
Accumulation, foam cell, white pulp		9	0	0	0	0	6	4	0	0	4*
Accumulation, foam cell, red pulp		9	0	0	0	0	6	4	0	0	4*
Bone marrow (sternum)						(0)					
Bone marrow (femur)						(0)					
Cardiovascular system											
Heart						(0)					
Cellular infiltration, mononuclear cell							9	1	0	0	1
Fibrosis, myocardium							10	0	0	0	0

*: P<0.05, **: P<0.01 (significantly different from control).

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

Figures in parentheses are number of animals with tissues examined histopathologically.

One female in the 20 mg/kg group died.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex Group and dose	Female											
		20 mg/kg					100 mg/kg						
		Number of animals		9			10						
		-	+	++	+++	Total	-	+	++	+++	Total		
Cardiovascular system													
Aorta		(0)											
Urinary system													
Kidney		(9)											
Hyperplasia, transitional epithelium, pelvis		8	1	0	0	1	10	0	0	0	0		
Tubule, basophilic		6	3	0	0	3	5	5	0	0	5*		
Karyomegaly, epithelial cell, proximal tubule		9	0	0	0	0	10	0	0	0	0		
Droplet, epithelial cell, proximal tubule, hyaline		9	0	0	0	0	10	0	0	0	0		
Cast, proteinaceous		6	3	0	0	3	6	4	0	0	4		
Dilatation, distal tubule		8	1	0	0	1	10	0	0	0	0		
Dilatation, pelvic cavity		9	0	0	0	0	10	0	0	0	0		
Cyst, medulla		9	0	0	0	0	10	0	0	0	0		
Hemorrhage, pelvis		8	1	0	0	1	10	0	0	0	0		
Cellular infiltration, mononuclear cell, pelvis		9	0	0	0	0	10	0	0	0	0		
Cellular infiltration, mononuclear cell, cortex		9	0	0	0	0	10	0	0	0	0		
Cellular exudation, pelvic cavity, neutrophil		9	0	0	0	0	10	0	0	0	0		
Mineralization, pelvis		7	2	0	0	2	10	0	0	0	0		
Mineralization, cortex		9	0	0	0	0	10	0	0	0	0		
Mineralization, medulla		2	7	0	0	7*	6	4	0	0	4		
Urinary bladder		(0)											
Genital system													
Testis		NA											
Atrophy, seminiferous tubule		NA											
Edema, interstitium		NA											
Epididymis		NA											
Decrease, sperm, lumen		NA											
Prostate		NA											
Cellular infiltration, mononuclear cell		NA											
Fibrosis, interstitium		NA											
Seminal vesicle		NA											
Ovary		(0)											
NR(10)													

*: P<0.05 (significantly different from control).

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

NA: not applicable.

Figures in parentheses are number of animals with tissues examined histopathologically.

One female in the 20 mg/kg group died.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Female									
		20 mg/kg					100 mg/kg				
	Number of animals		9			10					
		-	+	++	+++	Total	-	+	++	+++	Total
Genital system											
Uterus		(0)									
Metaplasia, epithelial cell, gland, squamous							8	2	0	0	2
Cyst, endometrium							9	1	0	0	1
Vagina		(0)									
Degeneration, epithelium, mucous							9	1	0	0	1
Mammary gland		(0)									
Ectasia, alveolus/duct							4	3	3	0	6
Adenoma							9	1	0	0	1
Endocrine system											
Pituitary		(0)									
Hyperplasia, anterior lobe, focal							10	0	0	0	0
Cyst, anterior lobe							10	0	0	0	0
Hemorrhage, Rathke's pouch							10	0	0	0	0
Gliosis, posterior lobe							10	0	0	0	0
Ectopic tissue, posterior lobe							9	1	0	0	1
Adenoma, anterior lobe							10	0	0	0	0
Thyroid		(0)									
Hyperplasia, C cell, focal							9	1	0	0	1
Remnant, ultimobranchial body							7	3	0	0	3
Parathyroid		(0)									
Adrenal		(0)									
Hypertrophy, cortical cell, focal							10	0	0	0	0
Hyperplasia, cortical cell, focal							7	3	0	0	3
Angiectasis							2	8	0	0	8
Nervous system											
Cerebrum		(0)									
Cerebellum		(0)									
Medulla oblongata		(0)									
Spinal cord		(0)									
Optic nerve		(0)									
Sciatic nerve		(0)									

Not significantly different from control.

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

Figures in parentheses are number of animals with tissues examined histopathologically.

One female in the 20 mg/kg group died.

Table 15 - continued

Histopathological findings
Male, Female, 52w

Organs and findings	Sex	Female									
		20 mg/kg					100 mg/kg				
	Number of animals	9		10							
		-	+	++	+++	Total	-	+	++	+++	Total
Special sense organs											
Eye						(0)					
Atrophy, retina, focal							9	1	0	0	1
Dysplasia, retina							9	1	0	0	1
Mineralization, cornea							10	0	0	0	0
Harderian gland						(0)					NR(10)
Musculoskeletal system											
M. biceps femoris						(0)					NR(10)
Sternum						(0)					NR(10)
Femur						(0)					NR(10)
Integumentary system											
Integument						(0)					
Cellular infiltration, mononuclear cell, subcutis							10	0	0	0	0
Keratoacanthoma							10	0	0	0	0
Others											
Extremity						(0)					
Formation, callus, hindlimb							2	1	0	0	1
Ulcer, hindlimb							1	2	0	0	2

Not significantly different from control.

Grade sign: -, none; +, mild (existence of tumor); ++, moderate; +++, marked.

NR: no remarkable changes.

Figures in parentheses are number of animals with tissues examined histopathologically.

One female in the 20 mg/kg group died.