

Figure 1. Growth inhibition of CHL cells treated with 2-naphthylisobutyl ether [Short-term treatment].

Exp. No. 9890(115-209)

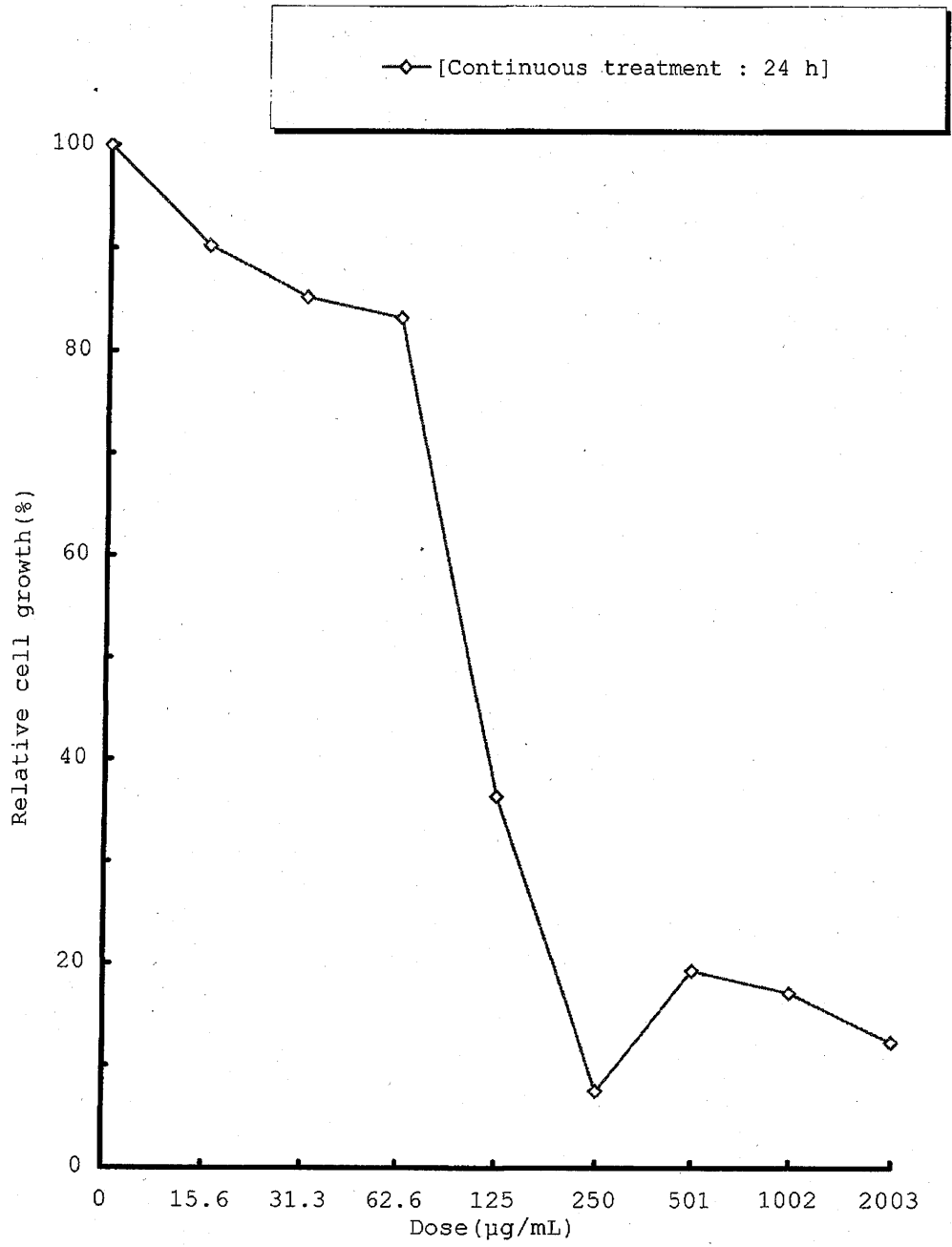


Figure 2. Growth inhibition of CHL cells treated with 2-naphthylisobutyl ether [Continuous treatment]

Table 1. Results of growth inhibition test of 2-naphthylisobutyl ether [Short-term treatment]

[Short-term treatment : -S9]				[Short-term treatment : +S9]			
Compound	Dose (µg/mL)	Relative cell growth (%)	[Mean]	Compound	Dose (µg/mL)	Relative cell growth (%)	[Mean]
DMSO a)	0	100.0 100.0	[100.0]	DMSO a)	0	100.0 100.0	[100.0]
2-Naphthylisobutyl ether	15.6	100.2 100.8	[100.5]	2-Naphthylisobutyl ether	15.6	103.9 98.0	[101.0]
	31.3	91.1 97.2	[94.2]		31.3	31.4 34.6	[33.0]
	62.6	89.7 83.3	[86.5]		62.6	22.9 20.4	[21.7]
	125	28.3 17.1	[22.7]		125	15.9 16.0	[16.0]
	250 d)	7.5 5.1	[6.3]		250 d)	6.6 13.6	[10.1]
	501 d)	6.0 7.3	[6.7]		501 d)	6.1 6.1	[6.1]
	1002 d)	12.9 12.0	[12.5]		1002 d)	11.1 10.8	[11.0]
	2003 d)	6.6 4.4	[5.5]		2003 d)	10.7 7.6	[9.2]

50% Growth inhibition dose was as follows:

[Short-term treatment : -S9] --- 99.1 µg/mL

[Short-term treatment : +S9] --- 33.2 µg/mL

a): Negative control (Dimethyl sulfoxide, 10 µL/mL)

d): Visible precipitation was observed at the end of treatment period.

Table 2. Results of growth inhibition test of 2-naphthylisobutyl ether [Continuous treatment] Exp. No. 9890(115-209)

Compound	Dose (µg/mL)	[Continuous treatment : 24 h]	
		Relative cell growth (%)	[Mean]
DMSO a)	0	100.0 100.0	[100.0]
2-Naphthylisobutyl ether	15.6	90.9 89.6	[90.3]
	31.3	92.3 78.3	[85.3]
	62.6	87.0 79.6	[83.3]
	125	46.5 26.3	[36.4]
	250	7.2 7.7	[7.5]
	501 d)	15.9 22.6	[19.3]
	1002 d)	12.8 21.4	[17.1]
	2003 d)	14.0 10.6	[12.3]

50% Growth inhibition dose was as follows:
[Continuous treatment : 24 h] --- 106 µg/mL

a): Negative control (Dimethyl sulfoxide, 10 µL/mL)

d): Visible precipitation was observed at the end of treatment period.

Table 3. Chromosome aberration test in CHL cells treated with 2-naphthylisobutyl ether [Short-term treatment : -S9] Exp. No. 9890 (115-209)

Compound	Dose (µg/mL)	Time of exposure (h)	Relative cell growth (%)	Number of analyzed cells	Number of cells with structural aberrations					Number of cells analyzed for polyploid	Number of polyploid cells (%)		
					gap	ctb	cte	csb	cse			oth	aberrations -gap(%)
DMSO a)	0	6	100.0	200	0	1	0	0	0	0	1 (0.5)	200	0 (0.0)
2-Naphthylisobutyl ether	76.8	6	77.2	200	0	0	0	0	0	0	0 (0.0)	200	0 (0.0)
	96.0	6	53.5	200	0	2	1	0	0	0	3 (1.5)	200	0 (0.0)
	120	6	24.1	200	0	2	4	0	0	0	5 (2.5)	200	1 (0.5)
	150	6	11.0	NA									
MMC b)	0.1	6	85.6	200	2	30	69	0	1	0	88 (44.0)	200	0 (0.0)

Abbreviation: ctb; chromatid break, cte: chromatid exchange, csb: chromosome break, cse: chromosome exchange, oth: others
 -gap: total number of cells with aberrations except gap
 NA: Not analyzed
 a): Negative control (Dimethyl sulfoxide, 10 µL/mL)
 b): Positive control: Mitomycin C

Table 4. Chromosome aberration test in CHL cells treated with 2-naphthylisobutyl ether
 [Short-term treatment : +S9] Exp. No. 9890(115-209)

Compound	Dose (µg/mL)	Time of exposure (h)	Relative cell growth (%)	Number of cells analyzed	Number of cells with structural aberrations				Number of cells with aberrations -gap(%)	Number of cells analyzed for polyploid	Number of polyploid cells (%)
					gap	ctb	cte	cse			
DMSO a)	0	6	100.0	200	0	0	0	0	0 (0.0)	200	1 (0.5)
2-Naphthylisobutyl ether	16.1	6	64.3	200	0	0	0	0	0 (0.0)	200	1 (0.5)
	20.1	6	56.2	200	0	0	0	0	0 (0.0)	200	0 (0.0)
	25.2	6	40.2	200	0	1	2	0	3 (1.5)	200	2 (1.0)
	31.5	6	14.6	NA							
CP b)	12.5	6	88.0	200	3	8	28	0	34 (17.0)	200	0 (0.0)

Abbreviation: ctb; chromatid break, cte: chromatid exchange, csb: chromosome break, cse: chromosome exchange, oth: others
 -gap: total number of cells with aberrations except gap

NA: Not analyzed

a): Negative control (Dimethyl sulfoxide, 10 µL/mL)

b): Positive control:Cyclophosphamide

Table 5. Chromosome aberration test in CHL cells treated with 2-naphthylisobutyl ether
 [Continuous treatment: 24 h] Exp. No. 9890(115-209)

Compound	Dose (µg/mL)	Time of exposure (h)	Relative Number of cell growth (%)	Number of cells with					Number of cells analyzed for polyploid	Number of polyploid cells (%)		
				gap	ctb	cte	ctc	cse			oth	aberrations -gap(%)
DMSO a)	0	24	100.0	1	1	0	0	0	0	200	1 (0.5)	
2-Naphthylisobutyl ether	61.4	24	72.5	0	2	0	0	0	0	200	2 (1.0)	
	76.8	24	83.0	1	1	0	0	0	0	200	1 (0.5)	
	96.0	24	66.5	1	2	0	0	0	0	200	2 (1.0)	
	120	24	40.3	2	3	1	0	0	0	200	4 (2.2)	
	150	24	26.3	Toxic								
MMC b)	0.05	24	123.1	5	33	68	0	0	0	200	84 (42.0)	
											1 (0.5)	

Abbreviation: ctb; chromatid break, cte: chromatid exchange, csc: chromosome break, cse: chromosome exchange, oth: others
 -gap: total number of cells with aberrations except gap
 a): Negative control (Dimethyl sulfoxide, 10 µL/mL)
 b): Positive control: Mitomycin C