Chemical Name;2-Chloroethyl ethyl ether
Synonym ;1-Chloro-2-ethoxyethane
2-Chlorodiethyl ether
1-ｸﾛﾛ-2-ｴﾄｷｼｴﾀﾝ
2-ｸﾛﾛｼﾞｴﾁﾙｴｰﾃﾙ

Molecular Weight ; 108.57
Melting Point ; — ℃
Boiling Point ; 107-108 ℃ [CHCD]
107 ℃ [Aldrich]
Flashing Point ; 15 ℃ [Aldrich]
Molecular Formula; C_4H_9ClO

Chemical Structure

$ClCH_2CH_2OCH_2CH_3$

CAS No. ; 628-34-2
MITI No. ; —
ML No. ; 2-(12)-127
Specified Chemical Substances; —

Source of Substance; Tokyo Kasei Kogyo Co.,Ltd.
Lot No. ; FAX01
Purity ; 98 %

Vehicle ; DMSO

Mutagenicity in Bacterial Test ; **Positive**

IARC Evaluation ; not yet cited

Conc. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvrA*		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(130)	(138)	(20)	(21)	(29)	(32)	(16)	(22)	(10)	(12)
	123	127	23	16	20	30	14	21	11	16
	108	123	18	16	27	31	9	23	8	11
0.0763	(116)	(125)	(21)	(16)	(24)	(31)	(12)	(22)	(10)	(14)
	119	133	15	24	23	37	13	10	7	18
	116	126	18	15	27	34	13	16	7	20
0.305	(118)	(130)	(17)	(20)	(25)	(36)	(13)	(13)	(7)	(19)
	100	111	16	23	30	36	14	18	13	10
	124	133	15	22	28	21	16	18	7	17
1.22	(112)	(122)	(16)	(23)	(29)	(29)	(15)	(18)	(10)	(14)
	104	139	20	16	28	29	21	30	8	14
	126	143	22	17	28	37	8	16	14	13
4.88	(115)	(141)	(21)	(17)	(28)	(33)	(15)	(23)	(11)	(14)
	114	131	21	18	23	31	25	16	11	14
	123	112	25	23	34	40	11	21	16	13
19.5	(119)	(122)	(23)	(21)	(29)	(36)	(18)	(19)	(14)	(14)
	135	119	22	23	30	34	18	13	10	13
	143	143	22	26	29	38	18	20	8	9
78.1	(139)	(131)	(22)	(25)	(30)	(36)	(18)	(17)	(9)	(11)
	139	151	20	16	25	31	9	30	6	11
	123	127	14	26	31	33	14	21	7	11
313	(131)	(139)	(17)	(21)	(28)	(32)	(12)	(26)	(7)	(11)
	126*	158	13*	22	42*	34	14*	26	18*	11
	124*	111	21*	18	29*	25	17*	26	7*	14
1250	(125*)	(135)	(17*)	(20)	(36*)	(30)	(16*)	(26)	(13*)	(13)
	146*	131	25*	22	39*	36	32*	29	15*	14
	143*	136	24*	21	40*	48	20*	18	13*	16
5000	(145*)	(134)	(25*)	(22)	(40*)	(42)	(26*)	(24)	(14*)	(15)
Judgement	—	—	—	—	—	—	—	—	—	—
Specific Mutagenicity										
Positive Control	AF-2 (931)	2-AA (1257)	NaN_3 (404)	2-AA (358)	AF-2 (319)	2-AA (1115)	AF-2 (381)	2-AA (258)	9-AA (860)	2-AA (255)

Conc. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvrA*		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(107)	(122)	(15)	(20)	(30)	(35)	(16)	(18)	(8)	(11)
	111		14		22		11		5	
	105		8		22		16		5	
39.1	(108)		(11)		(22)		(14)		(5)	
	129	112	21	20	18	43	10	11	3	3
	124	124	21	10	20	20	14	25	6	7
78.1	(127)	(118)	(21)	(15)	(19)	(32)	(12)	(18)	(5)	(5)
	121	114	18	17	20	41	15	16	6	10
	104	131	15	22	15	28	15	15	2	7
156	(113)	(123)	(17)	(20)	(18)	(35)	(15)	(16)	(4)	(9)
	107	107	17	14	28	41	8	26	5	9
	119	139	18	17	26	33	16	15	6	10
313	(113)	(123)	(18)	(16)	(26)	(37)	(12)	(21)	(6)	(10)
	104*	115	24	10	23	31	9	23	8	10
	141*	128	17	26	31	30	18	22	5	7
625	(123*)	(122)	(21)	(18)	(27)	(31)	(14)	(23)	(7)	(9)
	114*	129	16*	24	18*	26	17*	22	10*	10
	98*	127	13*	18	18*	37	14*	15	5*	7
1250	(106*)	(128)	(15*)	(21)	(18*)	(32)	(16*)	(19)	(8*)	(9)
	119*	120	23*	21	21*	30	20*	17	3*	5
	117*	104	14*	22	23*	33	18*	14	1*	13
2500	(118*)	(112)	(19*)	(22)	(22*)	(32)	(19*)	(16)	(2*)	(9)
		126		21		31		18		3
		160		22		34		18		7
5000		(143)		(22)		(33)		(18)		(5)
Judgement	−	−	−	−	−	−	−	−	−	−
Specific Mutagenicity										
Positive Control	AF-2 (819)	2-AA (1497)	NaN_3 (387)	2-AA (343)	AF-2 (305)	2-AA (1095)	AF-2 (326)	2-AA (285)	9-AA (614)	2-AA (235)

Experimental Data - 3

Conc. μg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2*uvrA*/pKM101	
	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(205)	(284)	(255)	(327)	(61)	(95)
	227	300	227	298	49	78
	192	297	241	359	46	107
0.0763	(210)	(299)	(234)	(329)	(48)	(93)
	184	310	216	353	71	94
	202	297	235	312	40	69
0.305	(193)	(304)	(226)	(333)	(56)	(82)
	216	287	262	318	53	79
	201	305	238	324	46	84
1.22	(209)	(296)	(250)	(321)	(50)	(82)
	202	287	266	331	53	90
	191	285	256	335	74	86
4.88	(197)	(286)	(261)	(333)	(64)	(88)
	209	269	269	314	53	89
	236	299	241	309	48	86
19.5	(223)	(284)	(255)	(312)	(51)	(88)
	211	276	220*	382	62	91
	193	293	267*	359	60	98
78.1	(202)	(285)	(244*)	(371)	(61)	(95)
	195	287	249*	324	76	83
	223	311	268*	342	67	84
313	(209)	(299)	(259*)	(333)	(72)	(84)
	233	263	281*	372	72	94
	211	286	281*	331	69	72
1250	(222)	(275)	(281*)	(352)	(71)	(83)
	220	275	524*	380	91	105
	213	282	529*	332	62	108
5000	(217)	(279)	(527*)	(356)	(77)	(107)
Judgement	−	−	+	−	−	−
Specific Mutagenicity			54.4			
Positive Control	BLM (688)	2-AA (1494)	PA (1588)	2-AA (1185)	AF-2 (1184)	2-AA (886)

Experimental Data - 4

Conc. μg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2*uvrA*/pKM101	
	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(231)	(303)	(247)	(303)	(40)	(67)
			267			
			265			
1.22			(266)			
			253			
			232			
2.44			(243)			
			261			
			267			
4.88			(264)			
			256			
			268			
9.77			(262)			
			252			
			247			
19.5			(250)			
			255			
			273			
39.1			(264)			
			213			
			226			
78.1			(220)			
	218	286	274	311	52	66
	245	312	240	295	30	62
156	(232)	(299)	(257)	(303)	(41)	(64)
	235	312	259*	317	51	77
	227	310	242*	335	49	81
313	(231)	(311)	(251*)	(326)	(50)	(79)
	238	307	258*	340	34	91
	201	326	235*	295	37	72
625	(220)	(317)	(247*)	(318)	(36)	(82)
	213	273	282*	353	61	71
	223	287	312*	336	51	81
1250	(218)	(280)	(297*)	(345)	(56)	(76)
	258	291	373*	316	52	77
	240	298	374*	329	54	94
2500	(249)	(295)	(374*)	(323)	(53)	(86)
	247	256	565*	323	79	115
	255	282	529*	336	59	106
5000	(251)	(269)	(547*)	(330)	(69)	(111)
Judgement	−	−	+	−	−	−
Specific Mutagenicity			60.0			
Positive Control	BLM (743)	2-AA (1825)	PA (2041)	2-AA (1458)	AF-2 (1488)	2-AA (1155)