1,5-Dibromopentane (1,5-ジブロモペンタン)

Chemical Name: 1,5-Dibromopentane
Synonym: Pentamethylene dibromide
Pentane, 1,5-dibromo-
Molecular weight: 229.94
Melting point: -34℃
Boiling point: 222.3℃, 110℃(20 mmHg)
99 ℃(12 mmHg)
Chemical Structure

$Br-CH_2-CH_2-CH_2-CH_2-CH_2-Br$

CAS No : 111-24-0
MITI No: (2)-3344
Source of Substance:Tokyo Kasei Kogyo Co.Ltd
Lot.No. : FCV01
Purity : 98 %
Vehicle : DMSO

Mutagenicity
in Bacterial Test : Positive

IARC Evaluation : not yet cited

Experimental Data

Con. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
DMSO	(195)	(176)	(27)	(41)	(27)	(36)	(15)	(21)	(9)	(10)
	142	128	21	18	24	31	16	22	5	10
	155	143	10	17	29	21	17	24	11	13
0.0763	(149)	(136)	(16)	(18)	(27)	(26)	(17)	(23)	(8)	(12)
	150	148	11	22	18	41	16	16	7	9
	149	137	20	14	29	17	14	22	1	2
0.305	(150)	(143)	(16)	(18)	(24)	(29)	(15)	(19)	(4)	(6)
	120	122	24	27	20	24	17	23	6	3
	137	127	13	17	24	33	21	23	9	7
1.22	(129)	(125)	(19)	(22)	(22)	(29)	(19)	(23)	(8)	(5)
	141	113	21	17	34	41	16	20	5	1
	156	122	21	23	22	30	14	25	5	8
4.88	(149)	(118)	(21)	(20)	(28)	(36)	(15)	(23)	(5)	(5)
	150	120	29	24	33	33	17	17	3	8
	166	139	23	22	22	37	17	21	5	9
19.5	(158)	(130)	(26)	(23)	(28)	(35)	(17)	(19)	(4)	(9)
	148	172	41*	38	40	30	17	29	10*	9
	129	169	37*	28	25	41	18	17	14*	6
78.1	(139)	(171)	(39*)	(33)	(33)	(36)	(18)	(23)	(12*)	(8)
	57*	55*	0*	0*	1*	25*	0*	5*	0*	8*
	29*	38*	0*	0*	15*	22*	0*	7*	0*	9*
313	(43*)	(47*)	(0*)	(0*)	(8*)	(24*)	(0*)	(6*)	(0*)	(9*)
	11*	0*	0*	0*	0*	0*	0*	0*	0*	0*
	38*	0*	0*	0*	0*	0*	0*	0*	0*	0*
1250	(25*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)
5000	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)
Judgement	-	-	-	-	-	-	-	-	-	-
Specific Mutagenicity Positive Control	AF2 (811)	2AA (1142)	NaN_3 (338)	2AA (294)	AF2 (250)	2AA (846)	AF2 (552)	2AA (356)	9AA (401)	2AA (190)

Con. μg/plate	Experimental Data: Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
DMSO	(171)	(147)	(16)	(13)	(18)	(25)	(23)	(29)	(12)	(15)
			29	13					15	24
			20	14					22	15
2.44			(25)	(14)					(19)	(20)
	167	146	28	9	21	34	22	29	15	22
	156	122	15	16	21	36	21	36	16	15
4.88	(162)	(134)	(22)	(13)	(21)	(35)	(22)	(33)	(16)	(19)
	144	129	17	17	15	39	29	28	14	25
	148	123	18	15	16	34	14	40	18	20
9.77	(146)	(126)	(18)	(16)	(16)	(37)	(22)	(34)	(16)	(23)
	126	94	18	21	30	32	21	24	16	22
	158	150	10	21	24	33	20	20	17	14
19.5	(142)	(122)	(14)	(21)	(27)	(33)	(21)	(22)	(17)	(18)
	100	141	14	18	26	41	20	24	15	23
	151	138	22	21	25	41	20	29	16	24
39.1	(126)	(140)	(18)	(20)	(26)	(41)	(20)	(27)	(16)	(24)
	138	151	17	20	47	41	24	30	11	21
	137	137	23	25	24	32	26	31	14	9
78.1	(138)	(144)	(20)	(23)	(36)	(37)	(25)	(31)	(13)	(15)
	98*	139	18*	40	32*	60	9*	25	7*	16
	109*	136	24*	26	20*	47	14*	39	9*	22
156	(104*)	(138)	(21*)	(33)	(26*)	(54)	(12*)	(32)	(8*)	(19)
	0*	0*	0*	0*	0*	32*	0*	0*	0*	0*
	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
313	(0*)	(0*)	(0*)	(0*)	(0*)	(16*)	(0*)	(0*)	(0*)	(0*)
Judgement	−	−	−	+	+	+	−	−	−	−
Specific Mutagenicity				128	230	186				
Positive Control	AF2	2AA	NaN_3	2AA	AF2	2AA	AF2	2AA	9AA	2AA
	(881)	(1327)	(469)	(330)	(290)	(826)	(531)	(365)	(397)	(279)

Experimental Data				
Con.	Number of Revertants/plate			
μg/	Base-substitution			
plate	TA100		TA1535	
	S9-	S9+	S9-	S9+
DMSO	(147)	(107)	(12)	(14)
			20	18
			7	14
2.44			(14)	(16)
	157	111	20	15
	179	116	9	7
4.88	(168)	(114)	(15)	(11)
	151	108	8	13
	146	130	13	16
9.77	(149)	(119)	(11)	(15)
	127	111	23	5
	117	127	18	14
19.5	(122)	(119)	(21)	(10)
	134	139	20	16
	165	124	15	18
39.1	(150)	(132)	(18)	(17)
	172	144	28	30
	206	124	20	18
78.1	(189)	(134)	(24)	(24)
	113*	133	5*	21*
	107*	144	8*	25*
156	(110*)	(139)	(7*)	(23*)
313	(0*)	(0*)	(0*)	(0*)
Judgement	−	−	+	−
Specific Mutagenicity			154	
Positive	AF2	2AA	NaN_3	2AA
Control	(1002)	(1268)	(159)	(237)