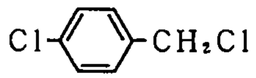
p-Chlorobenzyl chloride (p-クロロベンジルクロリド)

Chemical Name: p-Chlorobenzyl chloride
Synonym 1-Chloro-4-(chloromethyl) benzene
Benzene, 1-chloro-4-(chloromethyl)-
Molecular weight: 161.03
Melting point: 28 - 30℃
Boiling point: 213~214℃ (760mmHg), 216-222℃
Flashing point: 97 ℃
Chemical Structure



CAS No : 104-83-6
MITI No: (3)-78, (3)-91
M L No : 4-(15)-26, 4-(15)-37, 4-(15)-60
Source of Substance:Tokyo Kasei Kogyo Co.Ltd
Lot.No. : AX01
Purity : 98 %
Vehicle : DMSO

Mutagenicity in Bacterial Test : Negative

IARC Evaluation : not yet cited

Experimental Data

Number of Revertants/plate

Con. μg/plate	Base-substitution						Frame-shift			
	TA100		TA1535		WP2uvrA		TA98		TA1537	
	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+	S9-	S9+
DMSO	(139)	(152)	(12)	(11)	(31)	(40)	(12)	(20)	(15)	(18)
	139	156	8	8	31	36	10	23	16	14
	138	185	10	7	36	38	18	23	17	18
0.0763	(139)	(171)	(9)	(8)	(34)	(37)	(14)	(23)	(17)	(16)
	148	164	17	6	45	47	17	20	20	21
	135	165	8	13	46	32	20	24	14	23
0.305	(142)	(165)	(13)	(10)	(46)	(40)	(19)	(22)	(17)	(22)
	148	180	14	11	44	41	24	23	18	21
	179	151	9	8	38	47	22	26	17	22
1.22	(164)	(166)	(12)	(10)	(41)	(44)	(23)	(25)	(18)	(22)
	162	172	11	9	32	38	17	23	18	26
	153	166	11	6	33	33	23	32	18	23
4.88	(158)	(169)	(11)	(8)	(33)	(36)	(20)	(28)	(18)	(25)
	185	173	16	17	33	47	22	21	16	16
	178	195	9	11	45	39	20	30	22	22
19.5	(182)	(184)	(13)	(14)	(39)	(43)	(21)	(26)	(19)	(19)
	193*	241	10*	17	40	44	10*	26	13*	17
	205*	246	10*	10	57	56	13*	29	16*	18
78.1	(199*)	(244)	(10*)	(14)	(49)	(50)	(12*)	(28)	(15*)	(18)
	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
313	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)
1250	(0*)	(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	2AA	NaN3	2AA	AF2	2AA	AF2	2AA	9AA	2AA
	(790)	(1212)	(240)	(247)	(242)	(724)	(396)	(359)	(412)	(183)

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	(121)	(126)	(11)	(14)	(20)	(24)	(15)	(21)	(10)	(10)
	120		13				13		8	
	136		8				16		6	
1.22	(128)		(11)				(15)		(7)	
	128		7				16		10	
	120		7				22		7	
2.44	(124)		(7)				(19)		(9)	
	121	111	11	10	25	25	10	16	10	7
	127	109	16	10	17	30	10	13	13	10
4.88	(124)	(110)	(14)	(10)	(21)	(28)	(10)	(15)	(12)	(9)
	135	129	10	9	20	20	16	21	9	10
	138	115	7	11	25	25	14	25	6	11
9.77	(137)	(122)	(9)	(10)	(23)	(23)	(15)	(23)	(8)	(11)
	146	145	13	10	15	38	22	23	7	8
	155	142	13	13	26	23	17	30	6	7
19.5	(151)	(144)	(13)	(12)	(21)	(31)	(20)	(27)	(7)	(8)
	202*	149	16*	9	22	23	16*	16	10*	9
	146*	159	17*	13	28	28	23*	30	7*	10
39.1	(174*)	(154)	(17*)	(11)	(25)	(26)	(20*)	(27)	(9*)	(10)
	148*	207	6*	10	26	22	16*	31	7*	8
	155*	204	10*	8	30	38	16*	30	1*	7
78.1	(152*)	(206)	(8*)	(9)	(28)	(30)	(16*)	(31)	(4*)	(8)
		94*		13*	10*	37*		8*		9*
		112*		15*	2*	38*		15*		11*
156		(103*)		(14*)	(6*)	(38*)		(12*)		(10*)
		0*		0*	0*	0*		0*		0*
		0*		0*	0*	0*		0*		0*
313		(0*)		(0*)	(0*)	(0*)		(0*)		(0*)
Judgement	—	—	—	—	—	—	—	—	—	—
Specific Mutagenicity										
Positive Control	AF2	2AA	NaN3	2AA	AF2	2AA	AF2	2AA	9AA	2AA
	(942)	(1209)	(292)	(260)	(259)	(794)	(365)	(345)	(402)	(232)

Experimental Data						
Con.	Number of Revertants/plate					
μg/	Base-substitution					
plate	TA102		TA104		WP2uvrA/pKM101	
	S9-	S9+	S9-	S9+	S9-	S9+
DMSO	(297)	(363)	(339)	(358)	(204)	(268)
	250	347	300	344	193	246
	292	344	290	324	197	256
0.0763	(271)	(346)	(295)	(334)	(195)	(251)
	288	341	328	361	209	260
	250	361	301	389	195	262
0.305	(269)	(351)	(315)	(375)	(202)	(261)
	305	362	340	344	245	261
	294	387	348	366	205	266
1.22	(300)	(375)	(344)	(355)	(225)	(264)
	312	356	417	402	242	303
	310	380	404	439	243	271
4.88	(311)	(368)	(411)	(421)	(243)	(287)
	294*	405	558*	493	347	433
	301*	358	527*	455	323	434
19.5	(298*)	(382)	(543*)	(474)	(335)	(434)
	0*	201*	0*	372*	115*	295*
	0*	213*	0*	347*	129*	318*
78.1	(0*)	(207*)	(0*)	(360*)	(122*)	(307*)
313	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)
1250	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)
5000	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)
Judgement	—	—	—	—	—	—
Specific Mutagenicity						
Positive	BLM	2AA	PA	2AA	AF-2	2AA
Control	(959)	(2584)	(1780)	(1072)	(2991)	(1067)

Con. μg/plate	Experimental Data: Number of Revertants/plate, Base-substitution					
	TA102		TA104		WP2uvrA/pKM101	
	S9-	S9+	S9-	S9+	S9-	S9+
DMSO	(245)	(313)	(264)	(350)	(162)	(241)
	246		278			
	216		265			
0.610	(231)		(272)			
	219		253			
	239		213			
1.22	(229)		(233)			
	227	307	274	332	139	256
	208	263	279	337	145	233
2.44	(218)	(285)	(277)	(335)	(142)	(245)
	248	319	280	334	163	207
	247	284	282	374	183	234
4.88	(248)	(302)	(281)	(354)	(173)	(221)
	240	320	291	368	178	246
	248	336	272	335	159	242
9.77	(244)	(328)	(282)	(352)	(169)	(244)
	236*	330	329	370	219	299
	261*	316	338	395	178	284
19.5	(249*)	(323)	(334)	(383)	(199)	(292)
	243*	300	172*	397	239	317
	252*	313	390*	394	253	325
39.1	(248*)	(307)	(281*)	(396)	(246)	(321)
		293		447	248*	368
		325		416	304*	348
78.1		(309)		(432)	(276)	(358)
		252*		413*	96*	399*
		253*		462*	107*	423*
156		(253*)		(438*)	(102*)	(411*)
Judgement	—	—	—	—	—	—
Specific Mutagenicity						
Positive Control	BLM	2AA	PA	2AA	AF-2	2AA
	(766)	(2053)	(1259)	(994)	(2205)	(1230)

Experimental Data

Con. μg/plate	Number of Revertants/plate, Base-substitution			
	TA100		WP2uvrA/pKM101	
	S9-	S9+	S9-	S9+
DMSO	(121)	(146)	(192)	(246)
	150	130	216	252
	153	139	201	250
12.5	(152)	(135)	(209)	(251)
	185	121	246	319
	170	146	247	290
25	(178)	(134)	(247)	(305)
	190	198	318	391
	220	185	320	405
50	(205)	(192)	(319)	(398)
	171*	216	226*	463
	139*	207	255*	494
75	(155*)	(212)	(241*)	(479)
	0*	197	117*	477
	0*	253	126*	521
100	(0*)	(225)	(122*)	(499)
	0*	193*	0*	314*
	0*	171*	0*	301*
125	(0*)	(182*)	(0*)	(308*)
	0*	300	0*	164*
	0*	313	0*	204*
150	(0*)	(307)	(0*)	(184*)
		293	0*	145*
		325	0*	131*
175		(309)	(0*)	(138*)
		252*	0*	0*
		253*	0*	0*
200		(253*)	(0*)	(0*)
Judgement	—	—	—	—
Specific Mutagenicity				
Positive Control	AF2 (945)	2AA (1238)	AF2 (2666)	2AA (1166)