

p-Xylenediamine

[p-キシレンジアミン]

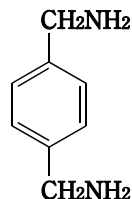
Experimental Data - 1

(B9308-1/4)

Chemical Name; p-Xylenediamine
 Synonym ; p-Xylylenediamine
1,4-Bis(aminomethyl)benzene
1,4-Benzenedimethanamine
α, α'-Diamino-p-xylene
p-キシレンジアミン
1,4-ビス(アミノメチル)ベンゼン
1,4-ベンゼンジメタナミン
α, α'-ジアミノ-p-キシレン

Molecular Weight ; 136.20
 Melting Point ; 62-64 °C [Aldrich], 35 °C [CHCD]
 Boiling Point ; 230 °C (10mmHg) [CHCD]
 Flashing Point ; - °C
 Molecular Formula; C₈H₁₂N₂

Chemical Structure



CAS No. ; 539-48-0
 MITI No. ; (3)-308 , (3)-2888
 ML No. ; -
 Specified Chemical Substances; -

Source of Substance; Tokyo Kasei Kogyo Co., Ltd.
 Lot No. ; FBX01
 Purity ; 99.5 %

Vehicle ; Distilled H₂O

Mutagenicity in Bacterial Test ; **Positive**

IARC Evaluation ; not yet cited

Conc. 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+
H ₂ O	(151)	(153)	(14)	(11)	(17)	(22)	(18)	(26)	(14)	(15)
	152	169	9	15	25	25	10	28	16	18
	157	143	9	5	16	31	15	25	11	23
0.0763	(155)	(156)	(9)	(10)	(21)	(28)	(13)	(27)	(14)	(21)
	141	148	14	5	24	23	18	25	9	18
	152	142	11	8	23	23	13	33	10	21
0.305	(147)	(145)	(13)	(7)	(24)	(23)	(16)	(29)	(10)	(20)
	164	177	10	18	15	26	23	23	21	8
	141	171	13	16	25	23	21	25	14	20
1.22	(153)	(174)	(12)	(17)	(20)	(25)	(22)	(24)	(18)	(14)
	148	142	7	17	14	23	16	24	14	18
	177	164	9	16	22	20	13	24	7	13
4.88	(163)	(153)	(8)	(17)	(18)	(22)	(15)	(24)	(11)	(16)
	141	134	14	11	14	28	14	38	9	18
	152	155	9	7	16	25	18	21	15	11
19.5	(147)	(145)	(12)	(9)	(15)	(27)	(16)	(30)	(12)	(15)
	137	165	11	17	26	14	18	24	16	24
	142	160	14	13	20	25	16	28	15	21
78.1	(140)	(163)	(13)	(15)	(23)	(20)	(17)	(26)	(16)	(23)
	105	163	6	15	11	17	21	30	10	10
	157	177	13	17	25	29	23	31	13	16
313	(131)	(170)	(10)	(16)	(18)	(23)	(22)	(31)	(12)	(13)
	197*	148*	7*	9*	18*	26*	18*	26*	8*	8*
	157*	148*	7*	2*	22*	21*	16*	17*	9*	5*
1250	(177*)	(148*)	(7*)	(6*)	(20*)	(24*)	(17*)	(22*)	(9*)	(7*)
	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
	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	AF-2	2-AA	NaN ₃	2-AA	AF-2	2-AA	AF-2	2-AA	9-AA	2-AA
Control	(783)	(998)	(415)	(211)	(148)	(1019)	(504)	(256)	(537)	(160)

Conc. 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+
H ₂ O	(158)	(164)	(15)	(20)	(34)	(33)	(20)	(32)	(15)	(17)
	215	190	24	25	30	34	16	28	9	16
	152	197	18	16	30	47	29	29	22	10
19.5	(184)	(194)	(21)	(21)	(30)	(41)	(23)	(29)	(16)	(13)
	192	206	21	15	43	37	23	33	20	11
	199	216	18	20	26	43	17	24	8	13
39.1	(196)	(211)	(20)	(18)	(35)	(40)	(20)	(29)	(14)	(12)
	208	190	18	11	23	25	21	40	10	25
	211	216	10	23	26	39	18	18	14	20
78.1	(210)	(203)	(14)	(17)	(25)	(32)	(20)	(29)	(12)	(23)
	178	198	16	23	26	32	21	24	11	13
	192	214	11	14	32	33	23	29	16	18
156	(185)	(206)	(14)	(19)	(29)	(33)	(22)	(27)	(14)	(16)
	173	183	11	17	34	41	20	31	18	11
	212	206	13	10	28	48	23	33	13	16
313	(193)	(195)	(12)	(14)	(31)	(45)	(22)	(32)	(16)	(14)
	164*	230	17*	21	39*	36	28*	28	16*	24
	160*	208	5*	11	33*	36	30*	25	14*	15
625	(162*)	(219)	(11*)	(16)	(36*)	(36)	(29*)	(27)	(15*)	(20)
	184*	204*	16*	11*	33*	24*	26*	38*	9*	9*
	173*	183*	8*	15*	28*	33*	20*	25*	16*	14*
1250	(179*)	(194*)	(12*)	(13*)	(31*)	(29*)	(23*)	(32*)	(13*)	(12*)
	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
2500	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)
Judgement	-	-	-	-	-	-	-	-	-	-
Specific Mutagenicity										
Positive	AF-2	2-AA	NaN ₃	2-AA	AF-2	2-AA	AF-2	2-AA	9-AA	2-AA
Control	(768)	(989)	(471)	(242)	(199)	(949)	(571)	(267)	(427)	(160)

Experimental Data - 3

(B9308-3/4)

Conc. μg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2uvrA/pKM101	
	S9-	S9+	S9-	S9+	S9-	S9+
H ₂ O	(267)	(365)	(428)	(472)	(87)	(123)
	259	348	424	454	84	136
0. 0763	250	330	429	467	78	123
	(255)	(339)	(427)	(461)	(81)	(130)
	288	337	418	418	86	127
0. 305	269	331	430	468	76	119
	(279)	(334)	(424)	(443)	(81)	(123)
	273	364	439	488	85	112
1. 22	271	355	406	476	101	142
	(272)	(360)	(423)	(482)	(93)	(127)
	276	335	456	451	70	153
4. 88	293	324	450	460	78	144
	(285)	(330)	(453)	(456)	(74)	(149)
	285	349	478	457	77	143
19. 5	271	374	480	449	81	122
	(278)	(362)	(479)	(453)	(79)	(133)
	241	346	419	452	82	162
78. 1	268	388	429	502	70	134
	(255)	(367)	(424)	(477)	(76)	(148)
	258	376	465	503	100	138
313	250	384	496	465	93	135
	(254)	(380)	(481)	(484)	(97)	(137)
	226*	325*	775*	954*	60*	83*
1250	219*	325*	801*	1077*	74*	97*
	(223*)	(325*)	(788*)	(1016*)	(67*)	(90*)
	0*	0*	0*	0*	0*	0*
5000	0*	0*	0*	0*	0*	0*
	(0*)	(0*)	(0*)	(0*)	(0*)	(0*)
Judgement	-	-	-	+	-	-
Specific Mutagenicity				435		
Positive Control	BLM (754)	2-AA (1551)	PA (1105)	2-AA (1058)	AF-2 (1512)	2-AA (969)

Experimental Data - 4

Conc. µg/plate	Number of Revertants/plate					
	Base-substitution					
	TA102		TA104		WP2 <i>uvrA</i> /pKM101	
	S9-	S9+	S9-	S9+	S9-	S9+
H ₂ O	(248)	(341)	(362)	(416)	(49)	(96)
	275	342	373	471	56	106
	267	319	353	462	66	89
19.5	(271)	(331)	(363)	(467)	(61)	(98)
	287	342	380	460	66	100
	281	353	372	461	75	107
39.1	(284)	(348)	(376)	(461)	(71)	(104)
	274	349	361	517	55	97
	246	298	367	419	57	112
78.1	(260)	(324)	(364)	(468)	(56)	(105)
	281	332	309	491	72	100
	233	347	400	489	67	71
156	(257)	(340)	(355)	(490)	(70)	(86)
	272	314	417	507	38	99
	271	337	391	468	40	109
313	(272)	(326)	(404)	(488)	(39)	(104)
	240	338	486*	509	61	105
	255	298	459*	433	47	101
625	(248)	(318)	(473*)	(471)	(54)	(103)
	212*	306*	638*	782*	64*	79*
	194*	269*	658*	778*	49*	81*
1250	(203*)	(288*)	(648*)	(780*)	(57*)	(80*)
	178*	366*	300*	638*	20*	101*
	126*	388*	254*	519*	25*	122*
2500	(152*)	(377*)	(277*)	(579*)	(23*)	(112*)
Judgement	-	-	-	-	-	-
Specific Mutagenicity						
Positive Control	BLM (711)	2-AA (1294)	PA (954)	2-AA (900)	AF-2 (1257)	2-AA (859)

Experimental Data - 5 (B9308-4/4)

Conc. µg/plate	Number of Revertants/plate	
	Base-substitution	
	TA104	
	S9-	S9+
H ₂ O	(327)	(394)
	314	411
	352	389
39.1	(333)	(400)
	319	457
	374	414
78.1	(347)	(436)
	472	414
	449	433
156	(461)	(424)
	377	387
	367	388
313	(372)	(388)
	660*	565
	584*	565
625	(622*)	(565)
	690*	878*
	712*	839*
800	(701*)	(859*)
	575*	907*
	607*	867*
1000	(591*)	(887*)
	377*	778*
	365*	776*
1250	(371*)	(777*)
	344*	853*
	359*	614*
1600	(352*)	(734*)
	331*	580*
	305*	552*
2000	(318*)	(566*)
Judgement	+	+
Specific Mutagenicity		
Positive Control	PA (1736)	2-AA (1050)