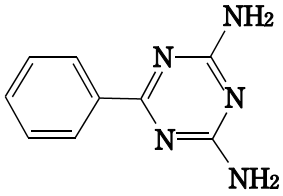
Chemical Name; Benzoguanamine
Synonym ; 2,4-Diamino-6-phenyl-1,3,5-triazine
6-Phenyl-1,3,5-triazine-2,4-diamine
2,4-ｼﾞｱﾐﾉ-6-ﾌｪﾆﾙ-1,3,5-ﾄﾘｱｼﾞﾝ
6-ﾌｪﾆﾙ-1,3,5-ﾄﾘｱｼﾞﾝ-2,4-ｼﾞｱﾐﾝ

Molecular Weight ; 187.20
Melting Point ; 227 - 228 ℃ [CHCD,Merck]
226 - 228 ℃ [Aldrich]
Boiling Point ; — ℃
Flashing Point ; — ℃
Molecular Formula; $C_9H_9N_5$

Chemical Structure



CAS No. ; 91-76-9
MITI No. ; (5)-1028
ML No. ; —
Specified Chemical Substances; —

Source of Substance; Tokyo Kasei Kogyo Co.,Ltd.
Lot No. ; GA01
Purity ; 99.9 %

Vehicle ; DMSO

Mutagenicity in Bacterial Test ; **Negative**

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	(141)	(143)	(11)	(15)	(24)	(30)	(20)	(27)	(8)	(10)
	133	131	9	13	38	30	24	31	9	9
	117	138	7	14	24	25	17	31	7	13
0.0763	(125)	(135)	(8)	(14)	(31)	(28)	(21)	(31)	(8)	(11)
	133	146	14	16	23	23	15	28	8	9
	148	144	11	17	23	30	11	24	5	13
0.305	(141)	(145)	(13)	(17)	(23)	(27)	(13)	(26)	(7)	(11)
	121	136	8	13	29	33	20	28	6	8
	124	143	14	17	26	26	14	28	6	11
1.22	(123)	(140)	(11)	(15)	(28)	(30)	(17)	(28)	(6)	(10)
	143	144	15	10	31	28	15	30	6	11
	128	149	11	11	23	29	18	31	11	11
4.88	(136)	(147)	(13)	(11)	(27)	(29)	(17)	(31)	(9)	(11)
	148	135	7	14	24	29	20	33	13	6
	134	166	14	15	22	54	16	28	6	11
19.5	(141)	(151)	(11)	(15)	(23)	(42)	(18)	(31)	(10)	(9)
	166	144	16	14	28	41	16	20	2	7
	138	152	10	15	29	43	21	28	8	11
78.1	(152)	(148)	(13)	(15)	(29)	(42)	(19)	(24)	(5)	(9)
	131	155	8	23	33	38	13	28	7	7
	153	124	11	13	26	26	16	15	10	13
313	(142)	(140)	(10)	(18)	(30)	(32)	(15)	(22)	(9)	(10)
	155	120	16	15	16	36	25	24	8	8*
	135	137	9	14	17	33	21	17	5	10*
1250	(145)	(129)	(13)	(15)	(17)	(35)	(23)	(21)	(7)	(9*)
	123	139*	9	10*	26	24*	18	10*	10	0*
	119	124*	9	13*	9	20*	15	29*	8	0*
5000	(121)	(132*)	(9)	(12*)	(18)	(22*)	(17)	(20*)	(9)	(0*)
Judgement	—	—	—	—	—	—	—	—	—	—
Specific Mutagenicity										
Positive Control	AF-2 (719)	2-AA (936)	NaN_3 (369)	2-AA (263)	AF-2 (143)	2-AA (1216)	AF-2 (578)	2-AA (297)	9-AA (467)	2-AA (129)

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	(127)	(118)	(10)	(12)	(33)	(37)	(20)	(25)	(8)	(8)
39.1										9 6 (8)
78.1	115 120 (118)	142 113 (128)	9 13 (11)	13 14 (14)	32 39 (36)	34 37 (36)	15 22 (19)	28 11 (20)	7 2 (5)	11 11 (11)
156	129 126 (128)	135 116 (126)	5 8 (7)	11 13 (12)	33 36 (35)	41 31 (36)	17 21 (19)	25 31 (28)	8 7 (8)	10 9 (10)
313	128 105 (117)	135 130 (133)	8 10 (9)	10 11 (11)	28 39 (34)	32 36 (34)	22 26 (24)	30 26 (28)	7 9 (8)	7 9 (8)
625	117 116 (117)	124 127 (126)	9 5 (7)	9 7 (8)	43 24 (34)	29 41 (35)	21 11 (16)	29 25 (27)	10 11 (11)	9 13 (11)
1250	117 111 (114)	128 126 (127)	5 11 (8)	14 16 (15)	44 33 (39)	38 36 (37)	28 22 (25)	25 16 (21)	8 8 (8)	10* 14* (12*)
2500	116 96 (106)	128 137 (133)	7 5 (6)	11 9 (10)	30 25 (28)	22 28 (25)	11 13 (12)	25 29 (27)	3 6 (5)	16* 8* (12*)
5000	94 92 (93)	105* 106* (106*)	6 7 (7)	7* 7* (7*)	25 23 (24)	25* 33* (29*)	15 13 (14)	15* 17* (16*)	9 5 (7)	
Judgement	—	—	—	—	—	—	—	—	—	—
Specific Mutagenicity										
Positive Control	AF-2 (754)	2-AA (1059)	NaN_3 (393)	2-AA (293)	AF-2 (171)	2-AA (1342)	AF-2 (510)	2-AA (321)	9-AA (513)	2-AA (178)

Experimental Data - 3

Conc. μg/plate	Number of Revertants/plate Base-substitution TA102 S9−	TA102 S9+	TA104 S9−	TA104 S9+	WP2*uvrA*/pKM101 S9−	WP2*uvrA*/pKM101 S9+
DMSO	(290)	(336)	(276)	(354)	(48)	(79)
	278	341	275	326	64	82
	290	361	328	310	53	78
0.0763	(284)	(351)	(302)	(318)	(59)	(80)
	284	384	263	364	52	96
	269	355	297	354	69	87
0.305	(277)	(370)	(280)	(359)	(61)	(92)
	299	347	295	331	43	81
	261	378	295	364	52	92
1.22	(280)	(363)	(295)	(348)	(48)	(87)
	291	384	221	332	63	81
	278	326	314	353	108	83
4.88	(285)	(355)	(268)	(343)	(86)	(82)
	271	367	272	324	69	101
	290	312	276	334	71	85
19.5	(281)	(340)	(274)	(329)	(70)	(93)
	310	352	293	344	62	91
	271	358	292	280	59	85
78.1	(291)	(355)	(293)	(312)	(61)	(88)
	287	380	269	337	68	74
	235	352	294	346	59	85
313	(261)	(366)	(282)	(342)	(64)	(80)
	236*	334	226	285	25	61
	247*	328	252	322	32	56
1250	(242*)	(331)	(239)	(304)	(29)	(59)
	163*	293*	184*	218*	6*	10*
	180*	263*	186*	216*	5*	15*
5000	(172*)	(278*)	(185*)	(217*)	(6*)	(13*)
Judgement	−	−	−	−	−	−
Specific Mutagenicity						
Positive Control	BLM (898)	2-AA (1261)	PA (1803)	2-AA (1174)	AF-2 (771)	2-AA (1075)

Experimental Data - 4

Conc. μg/plate	Number of Revertants/plate Base-substitution TA102 S9−	TA102 S9+	TA104 S9−	TA104 S9+	WP2*uvrA*/pKM101 S9−	WP2*uvrA*/pKM101 S9+
DMSO	(269)	(321)	(298)	(371)	(59)	(84)
	252					
	259					
19.5	(256)					
	274					
	266					
39.1	(270)					
	263	312	290	334	40	86
	263	331	263	332	46	75
78.1	(263)	(322)	(277)	(333)	(43)	(81)
	274	318	324	325	48	105
	234	310	295	452	60	97
156	(254)	(314)	(310)	(389)	(54)	(101)
	230	353	309	391	57	87
	236	312	285	384	40	74
313	(233)	(333)	(297)	(388)	(49)	(81)
	220*	325	275	356	34	76
	221*	320	263	367	56	70
625	(221*)	(323)	(269)	(362)	(45)	(73)
	235*	306	290	331	37	68
	205*	312	263	370	47	51
1250	(220*)	(309)	(277)	(351)	(42)	(60)
		298*	228	284	29	47
		312*	218	281	20	55
2500		(305*)	(223)	(283)	(25)	(51)
		215*	198*	275*	2*	15*
		183*	191*	226*	3*	13*
5000		(199*)	(195*)	(251*)	(3*)	(14*)
Judgement	−	−	−	−	−	−
Specific Mutagenicity						
Positive Control	BLM (871)	2-AA (1274)	PA (2055)	2-AA (1106)	AF-2 (1382)	2-AA (853)