Chemical Name ; Myristic acid

Synonym ; Tetradecanoic acid
テトラデカン酸

Molecular Weight ; 228.36
Melting Point ; 55.1℃ [Aldrich]
Boiling Point ; 250℃(100mmHg)[Aldrich]
Flashing Point ; >110℃ [Aldrich]
Molecular Formula ; $C_{14}H_{28}O_2$
Chemical Structure $CH_3(CH_2)_{12}COOH$

CAS No. ; 544-63-8
MITI No. ; (2)-608
ML No. ; −
Specified Chemical Substances ; −

Source of Substance; Tokyo Kasei Kogyo Co., Ltd.
Lot No. ; GD01
Purity ; >97%

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*uvr*A/pKM101		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(126)	(132)	(10)	(12)	(42)	(66)	(19)	(30)	(11)	(14)
	115	141	7	11	44	53	30	26	16	16
	128	138	16	13	13	60	18	30	8	11
1 .22	(122)	(140)	(12)	(12)	(29)	(57)	(24)	(28)	(12)	(14)
	159	146	3	20	44	75	20	29	8	15
	126	128	6	6	39	81	20	40	11	8
4 .88	(143)	(137)	(5)	(13)	(42)	(78)	(20)	(35)	(10)	(12)
	109 *	142	5 *	16	52	55	11 *	26	3 *	13
	112 *	141	8 *	13	44	75	8 *	25	3 *	11
19 .5	(111 *)	(142)	(7 *)	(15)	(48)	(65)	(10 *)	(26)	(3 *)	(12)
	0 *	122	0 *	8	46	74	0 *	21	0 *	13
	0 *	91	0 *	9	47	86	0 *	26	0 *	7
78 .1	(0 *)	(107)	(0 *)	(9)	(47)	(80)	(0 *)	(24)	(0 *)	(10)
	0 *	38 *	0 *	9	38	78	0 *	17 *	0 *	9
	0 *	38 *	0 *	8	28	76	0 *	17 *	0 *	5
313	(0 *)	(38 *)	(0 *)	(9)	(33)	(77)	(0 *)	(17 *)	(0 *)	(7)
	0 *	1 *	0 *	2 *	6 *	41	0 *	5 *	0 *	1 *
	0 *	2 *	0 *	6 *	9 *	40	0 *	5 *	0 *	1 *
1250 †	(0 *)	(2 *)	(0 *)	(4 *)	(8 *)	(41)	(0 *)	(5 *)	(0 *)	(1 *)
	0 *	1 *	0 *	2 *	8 *	63 *	0 *	9 *	0 *	2 *
	0 *	1 *	0 *	4 *	5 *	51 *	0 *	11 *	0 *	2 *
5000 †	(0 *)	(1 *)	(0 *)	(3 *)	(7 *)	(57 *)	(0 *)	(10 *)	(0 *)	(2 *)
Judgement	−	−	−	−	−	−	−	−	−	−
Specific Mutagenicity										
Positive Control	AF-2 (784)	2-AA (1418)	NaN_3 (465)	2-AA (319)	AF-2 (1503)	2-AA (1184)	AF-2 (525)	2-AA (467)	9-AA (808)	2-AA (186)

* Growth inhibitation was observed.
† Test chemical was precipitated with S9mix.(1250 μg/plate)
† Test chemical was precipitated with and without S10mix.(5000 μg/plate)

Conc. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvr*A/pKM101		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(135)	(138)	(8)	(7)	(56)	(87)	(20)	(26)	(8)	(10)
	122		5				23		8	
	141		6				17		7	
0 .305	(132)		(6)				(20)		(8)	
	129		8				14		5	
	134		7				13		3	
0 .610	(132)		(8)				(14)		(4)	
	119		10				8		8	
	126		11				11		3	
1 .22	(123)		(11)				(10)		(6)	
	113		9				17		11	
	152		5				15		5	
2 .44	(133)		(7)				(16)		(8)	
	129	152	10				16	33	7 *	
	141	131	7				15	21	7 *	
4 .88	(135)	(142)	(9)				(16)	(27)	(7 *)	
	107	139	2	11			24	25	5 *	13
	108	113	6	11			17	28	3 *	15
9 .77	(108)	(126)	(4)	(11)			(21)	(27)	(4 *)	(14)
	84 *	116	7 *	7	49		13 *	28	0 *	14
	78 *	102	1 *	13	60		10 *	25	0 *	9
19 .5	(81 *)	(109)	(4 *)	(10)	(55)		(12 *)	(27)	(0 *)	(12)
		115		13	56			20		9
		114		15	37			16		10
39 .1		(115)		(14)	(47)			(18)		(10)
		97		5	48	100		17		18
		99		10	52	69		16		11
78 .1		(98)		(8)	(50)	(85)		(17)		(15)
		62		7	40	82		16		8 *
		47		10	41	94		16		9 *
156		(55)		(9)	(41)	(88)		(16)		(9 *)
		31 *		8	37	68		24 *		7 *
		29 *		8	34	81		10 *		9 *
313		(30 *)		(8)	(36)	(75)		(17 *)		(8 *)
				7	32 *	77				2 *
				5	30 *	67				2 *
625				(6)	(31 *)	(72)				(2 *)
				2 *	9 *	57				0 *
				2 *	10 *	62				0 *
1250 †				(2 *)	(10 *)	(60)				(0 *)
						53				
						57				
2500 †						(55)				
						52 *				
						45 *				
5000 †						(49 *)				
Judgement	−	−	−	−	−	−	−	−	−	−
Specific Mutagenicity										
Positive Control	AF-2 (644)	2-AA (1237)	NaN_3 (461)	2-AA (351)	AF-2 (1080)	2-AA (1120)	AF-2 (511)	2-AA (500)	9-AA (659)	2-AA (200)

* Growth inhibitation was observed.
† Test chemical was precipitated with S9mix.

Experimental Data-3

Conc. μg/plate	Number of Revertants/plate							
	Base-substitution				Frame-shift			
	TA100		TA1535		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(118)	(143)	(9)	(12)	(21)	(32)	(7)	(12)
	121		11		24		8	
	151		5		28		5	
0 .305	(136)		(8)		(26)		(7)	
	127		10		28		5	
	123		1		36		7	
0 .610	(125)		(6)		(32)		(6)	
	102		11		34		6	
	109		8		29		8	
1 .22	(106)		(10)		(32)		(7)	
	113		3		23		3	
	108		10		24		3	
2 .44	(111)		(7)		(24)		(3)	
	135	167	7		39	30	8 *	
	153	153	13		34	47	5 *	
4 .88	(144)	(160)	(10)		(37)	(39)	(7 *)	
	109	146	11	17	21	38	5 *	16
	107	134	7	9	29	33	7 *	16
9 .77	(108)	(140)	(9)	(13)	(25)	(36)	(6 *)	(16)
	116 *	130	11 *	8	17 *	37	5 *	9
	112 *	124	6 *	11	20 *	36	8 *	17
19 .5	(114 *)	(127)	(9 *)	(10)	(19 *)	(37)	(7 *)	(13)
		121		18		46		14
		127		13		41		20
39 .1		(124)		(16)		(44)		(17)
		128		10		36		15
		114		13		38		11
78 .1		(121)		(12)		(37)		(13)
		100		6		28		10
		87		8		34		10
156		(94)		(7)		(31)		(10)
		33 *		3		29 *		10 *
		39 *		7		30 *		7 *
313		(36 *)		(5)		(30 *)		(9 *)
				10				1 *
				8				1 *
625				(9)				(1 *)
				6 *				3 *
				5 *				5 *
1250 †				(6 *)				(4 *)
Judgement	−	−	−	−	−	−	−	−
Specific Mutagenicity								
Positive Control	AF-2 (634)	2-AA (1337)	NaN_3 (441)	2-AA (356)	AF-2 (511)	2-AA (420)	9-AA (844)	2-AA (186)

Experimental Data-4 (B9722-3/3)

Conc. μg/plate	Number of Revertants/plate			
	Base-substitution		Frame-shift	
	TA1535		TA98	
	S9−	S9+	S9−	S9+
DMSO	(11)	(8)	(18)	(23)
				23
				25
4 .88				(24)
		8		17
		11		20
9 .77		(10)		(19)
		15		23
		6		14
19 .5		(11)		(19)
		13		16
		9		14
39 .1		(11)		(15)
		10		23
		11		23
78 .1		(11)		(23)
		5		16
		14		18
156		(10)		(17)
		7		8 *
		10		11 *
313		(9)		(10 *)
		6		
		5		
625		(6)		
		5 *		
		5 *		
1250 †		(5 *)		
Judgement		−		−
Specific Mutagenicity				
Positive Control	NaN_3 (297)	2-AA (298)	AF-2 (461)	2-AA (460)

* Growth inhibitation was observed.
† Test chemical was precipitated with S9mix.