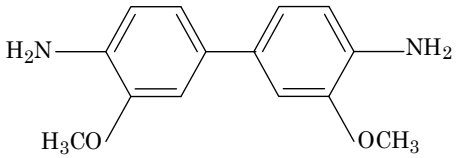
Chemical Name ; o-Dianisidine

Synonym ; 3,3'-Dimethoxybenzidine
3,3'-Dimethoxy-(1,1'-biphenyl)-4,4'-diamine
C.I. 37235
C.I. Azoic Diazo Component 48
3,3'-ジメトキシベンジジン
C.I. アゾイック DC 48

Molecular Weight ; 244.30
Melting Point ; 137-138℃[Aldrich]
Boiling Point ; −
Flashing Point ; 206 ℃[CHCD]
Molecular Formula ; $C_{14}H_{16}N_2O_2$

Chemical Structure



CAS No. ; 119-90-4
MITI No. ; (5)-2328
ML No. ; −
Specified Chemical Substances ; G1

Source of Substance; Wako Jyunyaku Kogyo Co., Ltd.
Lot No. ; CAF0936
Purity ; −

Vehicle ; DMSO

Judgement for
Chromosomal Aberration in CHL ; Positive

IARC Evaluation ; Group 2B

Treatment			No. of Metaphase	Polyploid		Cell with Structural Chromosome Aberration (%)								
Substance	Time (h)	Concentration (mg/ml)		(%)	Judgement	Gap	Chromatid		Chromosome		Others	Total		Judgement
						g	ctb	cte	csb	cse		−g	+g	
DMSO	24	1.0%	200	1.5	−	0.5	1	2	0	0.5	0	3	3.5	−
	48	1.0%	200	1	−	0	0	1	0	0	0	1	1	−
Test Chemical	24	0.025	200	2.5	−	0	2.5	1.5	0	0	0	4	4	−
		0.05	200	1.5	−	0	2	1.5	0	0.5	0	4	4	−
		0.10	200	1.5	−	0	6	4.5	0	0	0	9.5	9.5	±
		0.15	200	1	−	0	9	15.5	0	0	0	21.5	21.5	+
		0.20	No obserbation for metaphase											
	48	0.025	200	1	−	0	0.5	0.5	0	0	0	1	1	−
		0.05	200	1	−	0	1.5	0.5	0	0	0	2	2	−
		0.10	200	1	−	0.5	3.5	10	0	0	0	11	11	+
		0.15	200	2	−	0.5	3.5	21	0	0	0	23.5	24	+
Positive Control [MMC]	24	0.00004	200	3	−	0.5	15.5	39.5	0	0	0	47	47.5	+
	48	0.00004	200	2	−	0.5	12	39	0	0	0	42.5	43	+

※ There was no obserbation for methaphase with treatment of 48Hr at 0.16mg/ml.

Experimental Data with Metabolic Activation

Treatment			No. of Metaphase	Polyploid		Cell with Structural Chromosome Aberration (%)								
Substance	S9 mix	Concent-ration (mg/ml)		(%)	Judge-ment	Gap	Chromatid		Chromosome		Others	Total		Judge-ment
						g	ctb	cte	csb	cse		−g	+g	
DMSO	−	1.0%	200	2.5	−	0.5	1	0	0	0	0	1	1.5	−
	+	1.0%	200	1.5	−	0.5	1.5	0	0	0	0	1.5	2	−
Test Chemical	−	0.075	200	1	−	0	0.5	1	0	0	0	1.5	1.5	−
		0.15	200	2	−	0	0.5	1.5	0	0	0	2	2	−
		0.30	200	1	−	0.5	4	7	0	0	0	7.5	8	±
		0.45	200	0.5	−	0	7.5	23.5	0	0	0	25	25	+
		0.60	200	0.5	−	1	16	34.5	0	0	0	38	38	+
	+	0.15	200	1.5	−	0.5	0	0	0	0	0	0	0.5	−
		0.30	200	1.5	−	0	0	0	0	0	0	0	0	−
		0.45	200	2	−	0.5	1.5	2	0	0	0	3.5	3.5	−
		0.60	200	1	−	0	3.5	8	0	0	0	10	10	+
Positive Control [B[a]P]	−	0.01	200	2.5	−	0.5	1	2.5	0	0	0	3.5	4	−
	+	0.01	200	1.5	−	0	6	19.5	0	0	0	21.5	21.5	+

※ Test conditions: Treatment time ; 6h, Rcovery time ; 18h

※ There was no obsebation for high induction rate over 0.6mg/ml because of precipitation.