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DATASHEET

IBMX

Product overview

Name	IBMX
Cat No	HB3000
Biological action	Inhibitor
Purity	>98%
Description	Non-selective, competitive cAMP and cGMP PDE inhibitor. Facilitates neural progenitor cell differentiation.

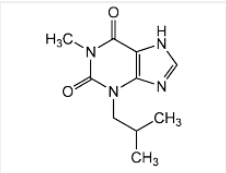
Biological Data

Biological description	Non-selective, competitive, cell permeable cAMP and cGMP PDE inhibitor, competitive, non-specific cAMP and cGMP phosphodiesterase inhibitor which increases cAMP levels. IBMX also enhances 3T3-L1 cell differentiation and promotes neural progenitor cell differentiation.

Solubility & Handling

Storage instructions	+4°C
Solubility overview	Soluble in DMSO (75 mM), and in ethanol (50 mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	3,7-Dihydro-1-methyl-3-(2-methylpropyl)-1H-purine-2,6-dione
Molecular Weight	222.3
Chemical structure	
Molecular Formula	$C_{10}H_{14}N_4O_2$
CAS Number	28822-58-4
PubChem identifier	3758
SMILES	CC(C)CN1C2=C(C(=O)N(C1=O)C)NC=N2
InChi	InChI=1S/C10H14N4O2/c1-6(2)4-14-8-7(11-5-12-8)9(15)13(3)10(14)16/h5-6H,4H2,1-3H3,(H,11,12)
InChiKey	APIXJSLKIYYUKG-UHFFFAOYSA-N
MDL number	MFCD00005584
Appearance	White to off-white solid

References

cAMP promotes the differentiation of neural progenitor cells in vitro via modulation of voltage-gated calcium channels.

Lepski et al (2013) Front Cell Neurosci. 19

PubMedID 24065885

Phosphodiesterase inhibitors suppress alpha2-adrenoceptor-mediated 5-hydroxytryptamine release from tracheae of newborn rabbits.

Freitag et al (1998) Eur J Pharmacol 354(1)
PubMedID 9726632

Phosphodiesterase inhibitor 3-isobutyl-methyl-xanthine affects rabbit ovaries and oviduct.

Sirotkin et al (2010) Eur J Pharmacol 643(1)
PubMedID 20599929