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DATASHEET

IBMX

Product overview

NameIBMXCat NoHB3000Biological actionInhibitorPurity>98%

DescriptionNon-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

Solubility overview Soluble in DMSO (75 mM), and in ethanol (50 mM)

Storage instructions +4°C

Storage of solutions Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if

storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Shipping Conditions Stable for ambient temperature shipping. Follow storage instructions on receipt.

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
Molecular Weight
Chemical structure

3,7-Dihydro-1-methyl-3-(2-methylpropyl)-1H-purine-2,6-dione

222.3

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

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