NEUROMICS

IBMX Data Sheet

Catalog Number:	MC11043	**Product Type:**	Small Molecule
Bio-Activity:	Phosphodiesterase (PDE) inhibitor, pan specific	**CAS #:**	28822-58-4
Research Categories:	Neuroscience, immunology, stem cells, cell death, addiction, inflammation	**Chemical Name:**	3,7-Dihydro-1-methyl-3-(2-methylpropyl)-1H-purine-2,6-dione
Solubility:	Soluble in DMSO (up to 15 mg/ml) or in Ethanol (up to 10 mg/ml).	**Molecular Formula:**	C10H14N4O2
Purity:	> 98%	**Molecular Weight:**	222.3
Format:	Powder	**Ship Temp:**	Ambient
Storage:	Room Temperature		

Application Notes

Description/Data:
Pan-specific inhibitor of phosphodiesterases (IC50=2-50 µM) [1]. Inhibition of PDEs leads to increased concentration of intracellular cAMP which activates PKA [2]. Does not inhibit PDE8 or PDE9 [3]. Weak adenosine receptor antagonist [4].

References:

1) Beavo et al. (1970), Effects of xanthine derivatives on lipolysis and on adenosine 3',5'-monophosphate phosphodiesterase activity; Mol. Pharmacol., 6 597

2) Tomes et al. (1993), Isobutylmethylxanthine and other classical cyclic nucleotide phosphodiesterase inhibitors affect cAMP-dependent protein kinase activity; Cell Signal., 5 615

3) Soderling et al. (2000), Regulation of cAMP and cGMP signaling: new phosphodiesterases and new functions; Curr. Opin. Cell Biol., 12 174

4) Daly et al. (1987), Adenosine receptors: development of selective agonists and antagonists; Prog. Clin. Biol. Res., 230 41

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