



## Catalog # 10-1008

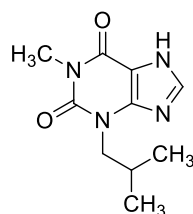
### IBMX

CAS# 28822-58-4

3-Isobutyl-1-methylxanthine

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

Lot # X102237



Pan-specific inhibitor of phosphodiesterases (IC<sub>50</sub> = 2-50  $\mu$ M). Inhibition of PDEs leads to increased concentration of intracellular cAMP which activates PKA<sup>2</sup>. Does not inhibit PDE8 or PDE9<sup>3</sup>. Weak adenosine receptor antagonist<sup>4</sup>.

- 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

### PHYSICAL DATA

Molecular Weight:	222.25
Molecular Formula:	C <sub>10</sub> H <sub>14</sub> N <sub>4</sub> O <sub>2</sub>
Purity:	99% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 15 mg/ml) or Ethanol (up to 10 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied at room temperature for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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