

IBMX

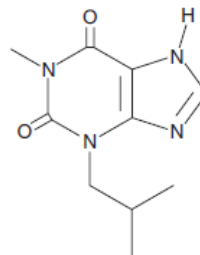
Catalog #: 27213

Lot #: 120605

Size: 50 mg

Structure:

CAS Registry #: 28822-58-4



Purity: ≥98%

Chemical Formula: C₁₀H₁₄N₄O₂

Molecular Weight: 222.3

Description: IBMX, also known as 1-Methyl-3-Isobutylxanthine and Isobutylmethylxanthine, is a widely-used inhibitor of cAMP and cGMP PDEs. It has been shown that the increase in cellular cAMP and cGMP levels, resulting from the inhibition of PDEs by IBMX, activates cyclic-nucleotide-regulated protein kinases. IBMX does not inhibit PDE8A, PDE8B, or PDE9.

Appearance: A crystalline solid

Solubility: Solubility in ethanol is ~5 mg/ml and DMSO is ~10 mg/ml. For biological experiments, dilute the organic solvent into aqueous buffers or isotonic saline. Do not store aqueous solutions for more than one day.

Biological Activity: IBMX inhibits PDEs as listed below.

PDE	IC ₅₀
PDE1	19 μM
PDE2	50 μM
PDE3	18 μM
PDE4	13 μM
PDE5	32 μM
PDE7	7 μM
PDE11	50 μM

Storage/Stability: Store at or below -20°C for up to two years.

Quality Control: The purity was determined by HPLC analysis.

References:

1. Fawcett, L., *et al.*, *Proc. Natl. Acad. Sci. USA* 2000; **97(7)**: 3702-3707.
2. Snyder, S.H., *et al.*, *Proc. Natl. Acad. Sci. USA* 1981; **78(5)**: 3260-3264.