Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

IBMX

Catalog No: tcsc3361

Available Sizes

Size: 50mg

Specifications

CAS No:
28822-58-4

Formula:
$C_{10}H_{14}N_4O_2$

Pathway:
Metabolic Enzyme/Protease

Target:
Phosphodiesterase (PDE)

Purity / Grade:
>98%

Solubility:
DMSO : 150 mg/mL (674.95 mM; Need ultrasonic)

Alternative Names:
3-Isobutyl-1-methylxanthine; Isobutylmethylxanthine

Observed Molecular Weight:
222.24

Product Description

IBMX is a broad-spectrum phosphodiesterase (**PDE**) inhibitor, with **IC_{50}**s of 6.5, 26.3 and 31.7 μM for **PDE3**, **PDE4** and **PDE5**, respectively.

IC50 & Target: IC50: 6.5±1.2 μM(PDE3), 26.3±3.9 μM (PDE4), 31.7±5.3 μM (PDE5)[1]

In Vitro:

Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

At 100 μM, KMUP-1 (a xanthine derivative) and IBMX are the most effective at inducing tracheal relaxation; the magnitude of the relaxation responses induced by KMUP-1 and IBMX are not significantly different[1]. IBMX (100 μM) activates renal outer medullary K^+ (ROMK) channels (n=6, P+ (HK)-fed rats with IBMX (100 μM) for 20 min leads to a significant increase in tubular cAMP content to 1.43±0.35 pg/mm tubule length (n=14) compare with that measured in vehicle-treated controls (0.61±0.13 pg/mm tubule length, n=12, P[2].

In Vivo: IBMX, a non-selective PDE inhibitor significantly decreases the liver glycogen storage (mg/g, IBMX 22±1.5 P0.05) also mc2 does not change plasma glucose (control=141±3 and mc2=145±5). IBMX has the highest efficacy on increasing plasma glucose[3]. Treatments with IBMX and Apocynin significantly decrease cold-induced elevation of right ventricular (RV) systolic pressure (23.5±1.8 and 24.2±0.6 mmHg, respectively) although they do not decrease RV pressure to the warm control levels. IBMX or Apocynin significantly reduces medial layer thickness (19.0±0.9, and 16.9±0.8 μm, respectively) and increases lumen diameter (62.7±4.2, and 59.5±4.3 μm, respectively) of small PAs in cold-exposed rats[4].