Inhibitors, Agonists, Screening Libraries

Data Sheet

Product Name: Proxyphylline
Cat. No.: HY-B1742
CAS No.: 603-00-9
Molecular Formula: C$_{10}$H$_{14}$N$_{4}$O$_{3}$
Molecular Weight: 238.24
Target: Adenosine Receptor
Pathway: GPCR/G Protein
Solubility: 10 mM in DMSO

BIOLOGICAL ACTIVITY:
Proxyphylline is a methylxanthine derivative clinical used as cardiac stimulant, vasodilator and bronchodilator.

**In Vitro:** Proxyphylline has shown vasodilatory and cardiac stimulatory effects. Proxyphylline produces an increase in the coronary flow associated with a definite positive inotropic effect$^{[1]}$. Proxyphylline inhibits tracheal PDE-activity and half-maximum relaxation of tracheal smooth muscle is obtained with 100 μg/mL proxyphylline$^{[2]}$.

**In Vivo:** In a double-blind cross-over study, proxyphylline exhibits bronchodilatory effect$^{[3]}$. Proxyphylline inhibits cAMP and cGMP hydrolysis in human lung tissue. The apparent inhibition constant of proxyphylline is 0.06-0.7 mM at low cAMP concentrations and it is 1.0 mM at high cAMP concentrations$^{[3]}$.

References:

Caution: Product has not been fully validated for medical applications. For research use only.

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