

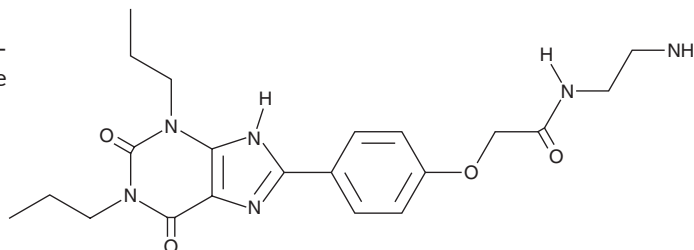
PRODUCT INFORMATION



Xanthine amine congener

Item No. 23077

CAS Registry No.: 96865-92-8
Formal Name: N-(2-aminoethyl)-2-[4-(2,3,6,7-tetrahydro-2,6-dioxo-1,3-dipropyl-1H-purin-8-yl)phenoxy]-acetamide
Synonym: XAC
MF: C₂₁H₂₈N₆O₄
FW: 428.5
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Xanthine amine congener (XAC) is supplied as a solid. A stock solution may be made by dissolving the XAC in the solvent of choice, which should be purged with an inert gas. XAC is soluble in the organic solvent DMSO.

Description

XAC is a non-selective adenosine receptor antagonist with K_b values of 83, 25, and 15 nM for rat PC12 cells, human platelets that endogenously express adenosine A_{2A} receptors, and rat fat cells that endogenously express A₁ receptors, respectively.¹ It reduces adenylate cyclase activity stimulated by 5'-N-ethylcarboxamidoadenosine (NECA; Item No. 21420) in human platelets (EC_{50} s = 1 and 0.31 μ M in the presence and absence of XAC, respectively). XAC also reverses R-PIA-induced inhibition of isoproterenol-stimulated adenylate cyclase activity in rat fat cell membranes (IC_{50} s = 146 and 26 nM in the presence and absence of XAC, respectively). *In vivo*, XAC reverses reductions in heart rate and blood pressure induced by 2-chloro-3-deazaadenosine (2-CADO; Item No. 9000787), R-PIA, and NECA in rats when administered at doses ranging from 0.1 to 1.0 mg/kg.² XAC (39.8 mg/kg) also induces convulsions in mice.³

References

1. Ukena, D., Daly, J.W., Kirk, K.L., *et al.* Functionalized congeners of 1,3-dipropyl-8-phenylxanthine: Potent antagonists for adenosine receptors that modulate membrane adenylate cyclase in pheochromocytoma cells, platelets and fat cells. *Life Sci.* **38(9)**, 797-807 (1986).
2. Evoniuk, G., Jacobson, K.A., Shamim, M.T., *et al.* A1- and A2-selective adenosine antagonists: *In vivo* characterization of cardiovascular effects. *J. Pharmacol. Exp. Ther.* **242(3)**, 882-887 (1987).
3. Morgan, P.F., Deckert, J., Jacobson, K.A., *et al.* Potent convulsant actions of the adenosine receptor antagonist, xanthine amine congener (XAC). *Life Sci.* **45(8)**, 719-728 (1989).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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