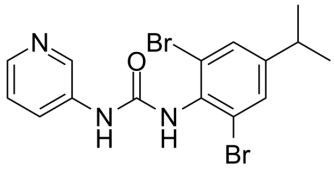
BX430

Cat. No.:	HY-110237
CAS No.:	688309-70-8
Molecular Formula:	$C_{15}H_{15}Br_2N_3O$
Molecular Weight:	413.11
Target:	P2X Receptor; Calcium Channel
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 83.33 mg/mL (201.71 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4207 mL	12.1033 mL	24.2066 mL
	5 mM	0.4841 mL	2.4207 mL	4.8413 mL
	10 mM	0.2421 mL	1.2103 mL	2.4207 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.03 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.03 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.03 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BX430 is a potent and selective noncompetitive allosteric human P2X4 receptor channels antagonist with an IC_{50} of 0.54 μM. BX430 has species specificity. BX430 is used for chronic pain and cardiovascular disease.

IC_{50} & Target

IC50: 0.54 μM (human P2X4 receptor channels)[1]

In Vitro

BX430 has virtually no functional impact on all other P2X subtypes, namely, P2X1-P2X3, P2X5, and P2X7, at 10-100 times its IC_{50}[1].

BX430 is a potent antagonist of zebrafish P2X4 but has no effect on rat and mouse P2X4 orthologs[1].
Human P2X4-expressing cells treated with thapsigargin plus BX430 shows a significant reduction in the intracellular calcium rise evoked by ATP[1].
BX430 (5 μM) markedly reduces the amplitude of ATP-evoked intracellular calcium responses in THP-1 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ase AR, et al. Identification and characterization of a selective allosteric antagonist of human P2X4 receptor channels. Mol Pharmacol. 2015 Apr;87(4):606-16.

[2]. Sophocleous RA, et al. Pharmacological and genetic characterisation of the canine P2X4 receptor. Br J Pharmacol. 2020 Feb 4.

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