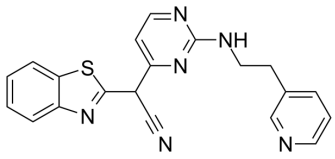
AS601245

Cat. No.:	HY-11010
CAS No.:	345987-15-7
Molecular Formula:	$C_{20}H_{16}N_6S$
Molecular Weight:	372.45
Target:	JNK
Pathway:	MAPK/ERK Pathway
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 : 10 mg/mL (26.85 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6849 mL	13.4246 mL	26.8492 mL
	5 mM	0.5370 mL	2.6849 mL	5.3698 mL
	10 mM	0.2685 mL	1.3425 mL	2.6849 mL

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

In Vivo

1. Add each solvent one by one: 100% PEG-300
   Solubility: 20 mg/mL (53.70 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 0.5% MC >> 0.5% Tween-80
   Solubility: 5 mg/mL (13.42 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1 mg/mL (2.68 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1 mg/mL (2.68 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

AS601245 is an orally active, selective, ATP competitive JNK (c-Jun NH2-terminal protein kinase) inhibitor with IC_{50}s of 150, 220, and 70 nM for three JNK human isoforms (hJNK1, hJNK2, and hJNK3), respectively. AS601245 exhibits 10- to 20-fold selectivity over c-src, CDK2, and c-Raf and more than 50- to 100-fold selectivity over a range of Ser/Thr- and Tyr-protein kinases. Neuroprotective properties[1][2].

IC_{50} & Target	hJNK1 150 nM (IC_{50})	hJNK2 220 nM (IC_{50})	hJNK3 70 nM (IC_{50})
In Vitro	AS601245, an anti-Inflammatory JNK inhibitor, and Clofibrate have a synergistic effect in inducing cell responses and in affecting the gene expression profile in CaCo-2 colon cancer cells [2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.		
In Vivo	AS601245 (40, 60, and 80 mg/kg; i.p.) provides significant protection against the delayed loss of hippocampal CA1 neurons in a gerbil model of transient global ischemia[1]. AS601245 (0.3-10 mg/kg; p.o.) is a potent inhibitor of LPS-induced TNF-α release in mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.		

Animal Model:	C3H/HEN mice[1]
Dosage:	0.3, 1, 3, or 10 mg/kg
Administration:	P.o.
Result:	Decreased the TNF-α release in a dose-dependent manner.

CUSTOMER VALIDATION

- Nat Commun. 2021 Nov 16;12(1):6607.
- Cell Rep. 2022 Nov 22;41(8):111707.
- Cell Biol Toxicol. 2022 Jan 14.
- J Ethnopharmacol. 2023 Jul 10;116901.
- Theriogenology. 22 February 2022.

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REFERENCES

[1]. Carboni S, et al. AS601245 (1,3-benzothiazol-2-yl (2-[[2-(3-pyridinyl) ethyl] amino]-4 pyrimidinyl) acetonitrile): a c-Jun NH2-terminal protein kinase inhibitor with neuroprotective properties. J Pharmacol Exp Ther. 2004;310(1):25-32.

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