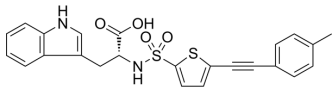
S 3304

Cat. No.:	HY-106992
CAS No.:	203640-27-1
Molecular Formula:	$C_{24}H_{20}N_2O_4S_2$
Molecular Weight:	464.56
Target:	MMP
Pathway:	Metabolic Enzyme/Protease
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 : ≥ 83.3 mg/mL (179.31 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1526 mL	10.7629 mL	21.5257 mL
	5 mM	0.4305 mL	2.1526 mL	4.3051 mL
	10 mM	0.2153 mL	1.0763 mL	2.1526 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: ≥ 2.5 mg/mL (5.38 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (5.38 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

S 3304 is a novel matrix metalloproteinases (MMP) inhibitor specific for MMP-2 and MMP-9. S 3304 is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

IC_{50} & Target

MMP-9

In Vitro

S 3304 is a novel D-tryptophan derivative and a potent, orally active, noncytotoxic Matrix metalloproteinases inhibitor (MMPI). Biochemical studies show that S 3304 most potently inhibits the activities of MMP-2 and MMP-9 but does not inhibit MMP-1, MMP-3, or MMP-7 and may, therefore, lack the musculoskeletal side effects seen with nonspecific inhibitors[1].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In vivo pharmacologic studies have shown that the oral administration of S 3304, at a dose range of 20 to 200 mg/kg, inhibits angiogenesis, artificially induced in mice by the dorsal air-sac method. Similar oral doses of S 3304 result in potent inhibition of metastatic lung colonization of Lewis murine lung carcinoma injected via tail vein and liver metastasis of C-1H human colon cancer implanted into the spleen[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Chiappori AA, et al. A phase I pharmacokinetic and pharmacodynamic study of s-3304, a novel matrix metalloproteinase inhibitor, in patients with advanced and refractory solid tumors. Clin Cancer Res. 2007 Apr 1;13(7):2091-9.

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

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