Immunoproteasome inhibitor 1

Cat. No.: HY-144452

CAS No.: 2755772-63-3

Molecular Formula: $C_{20}H_{26}N_2O_4$

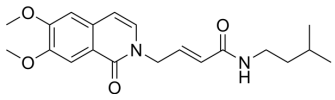
Molecular Weight: 358.43

Target: Proteasome

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (278.99 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7899 mL	13.9497 mL	27.8995 mL
	5 mM	0.5580 mL	2.7899 mL	5.5799 mL
	10 mM	0.2790 mL	1.3950 mL	2.7899 mL

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

BIOLOGICAL ACTIVITY

Description

Immunoproteasome inhibitor 1 is a potent, reversible, time-independent immunoproteasome and proteasome inhibitor (K_is of 1.18, 0.27, 1.91 μM in β5c, β1i, β5i submits, respectively). Immunoproteasome inhibitor 1 can be used for the research of certain neoplastic diseases[1].

IC_{50} & Target	β5c submit	β1i submit	β2i submit	β5i submit
	1.18 μM (Ki)	0.27 μM (Ki)	20 μM (Ki)	1.91 μM (Ki)

In Vitro

Immunoproteasome inhibitor 1 (compound 9) (0-25 μM; 0-600 seconds; in Human 20S immunoproteasome and human 20S proteasome) has high binding affinity for the β1i subunit (0.27 μM) of immunoproteasome and proteasome, coupling with good inhibitory properties towards β5i and β5c subunits. And the results of against the β5i subunit shows that the inhibition is reversible, time-independent[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ettari R, et al. Development of isoquinolinone derivatives as immunoproteasome inhibitors. Bioorg Med Chem Lett. 2022;55:128478.

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