TAPI-1

Cat. No.: HY-16657

CAS No.: 163847-77-6

Molecular Formula: $C_{26}H_{37}N_5O_5$

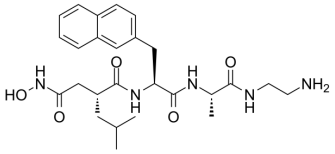
Molecular Weight: 499.6

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 : ≥ 31 mg/mL (62.05 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.0016 mL	10.0080 mL	20.0160 mL
5 mM	0.4003 mL	2.0016 mL	4.0032 mL
10 mM	0.2002 mL	1.0008 mL	2.0016 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 (4.16 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.16 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.16 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

TAPI-1 is a TACE (ADAM17) inhibitor and blocks the shedding of several cell surface proteins[1]. TAPI-1 is also a metalloproteinase (MMP) inhibitor[2].

IC_{50} & Target

TACE (ADAM17)[1], MMP[2]

In Vitro

TAPI-1 (1 μM for 30 min) increases cell viability in LPS-treated HK-2 cells[1].

TAPI-1 attenuates oxidative stress and inflammatory cytokines[1]
LPS treatment significantly induces renal IL-6 and TNFα mRNA expression, while these changes is attenuated with TAPI-1 pretreatment in LPS-treated HK-2 cells[1].

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

Cell Viability Assay[1]

Cell Line:	LPS-treated HK-2 cells
Concentration:	1 μM
Incubation Time:	30 minutes (pre-treated)
Result:	Increased cell viability.

CUSTOMER VALIDATION

- MedComm. 2023 Jul 8;4(4):e320.
- J Neurovirol. 2023 Apr 25.
- Dig Dis Sci. 2023 Nov 26.
- Int J Endocrinol. 2017;2017:9501792.
- Research Square Preprint. 2022 Jan.

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REFERENCES

[1]. Bae EH, et al. Tumor necrosis factor α-converting enzyme inhibitor attenuates lipopolysaccharide-induced reactive oxygen species and mitogen-activated protein kinase expression in human renal proximal tubule epithelial cells. Korean J Physiol Pharmacol. 2

[2]. Moss ML, et al. Recent Advances in ADAM17 Research: A Promising Target for Cancer and Inflammation. Mediators Inflamm. 2017;2017:9673537.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA