Product Name: TAPI-1
Revision Date: 6/30/2018

Product Data Sheet

Chemical Properties

Product Name: TAPI-1
Cas No.: 171235-71-5
M.Wt: 499.6
Formula: C26H37N5O5

Chemical Name: N1-((R)-1-(((R)-1-((2-aminoethyl)amino)-1-oxopropan-2-yl)amino)-3-(naphthalen-2-yl)-1-oxopropan-2-yl)-N4-hydroxy-2-isobutylsuccinamide

Canonical SMILES: NCCNC([C@@H](C)NC([C@H](NC(CC(C)CC(NO)=O)=O)CC1=CC2=CC=CC=C2C=C1)=O)=O

Solubility: ≥ 24.98 mg/mL in DMSO
Storage: Store at -20°C

General tips: For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shopping Condition: Evaluation sample solution: ship with blue ice
All other available size: ship with RT, or blue ice upon request

Biological Activity

Targets: Proteases
Pathways: MMP

Description:

TAPI-1 is an inhibitor of tumour necrosis factor with IC50 value of 8.09 μM [1].

TAPI-1 is an inhibitor of TACE/ADAM17 which catalyzes the cleavage of full-length APP to the soluble N-terminal fragment (sAPPα). The release of sAPPα has been reported to be a
receptor-coupled process increased by the stimulation of muscarinic receptors. In HEK293 cells, treatment of TAPI-1 resulted in an inhibition of increased sAPPα which was induced by the expressing of M3 subtype. The IC50 values of TAPI-1 in the inhibition of M3-increased sAPPα and constitutive release of sAPPα were 3.61 μM and 8.09 μM, respectively. Besides APP, TAPI-1 was also found to have inhibitory effects on the release of TNF-α, IL6R, TNFRI and TNFRII with IC50 values of 50-100, 5-10, 5-10 and 25-50 mM, respectively [1, 2].

Reference:

Protocol

Cell experiment:

Cell lines
human pulmonary mucoepidermoid carcinoma cell line, NCI-H292 cells

Preparation method
The solubility of this compound in DMSO is > 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Reacting conditions

Applications
TAPI-1, tumor necrosis factor α protease inhibitor-1, is an inhibitor of TACE (TNF-α converting enzyme). TAPI-1 inhibits ectodomain shedding of TNF-α, L-selectin, and p55 TNF-α receptor. Pretreating cells with TAPI-1 inhibits PMA-induced EGFR phosphorylation. Besides, TAPI-1 could block TGF-α release and block the production of mucin induced by PMA, PA sup, and LPS [1]. TAPI-1 is also a general matrix metalloproteinase (MMP) and ADAM inhibitor [2].

Reference:


Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.