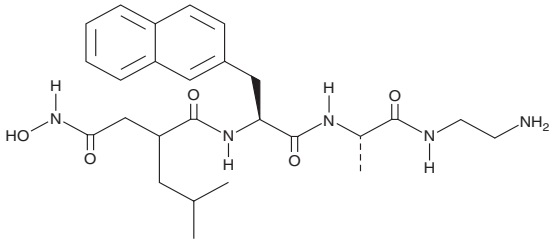
PRODUCT INFORMATION

TAPI-1

Item No. 18505

CAS Registry No.: 171235-71-5
Formal Name: N-[2-[2-(hydroxyamino)-2-oxoethyl]-4-methyl-1-oxopentyl]-3-(2-naphthalenyl)-L-alanyl-N-(2-aminoethyl)-(9CI)L-alaninamide
Synonym: TAPI
MF: $C_{26}H_{37}N_5O_5$
FW: 499.6
Purity: ≥98%
UV/Vis.: λ_{max}: 224, 282 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

TAPI-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the TAPI-1 in the solvent of choice, which should be purged with an inert gas. TAPI-1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of TAPI-1 in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of TAPI-1 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of TAPI-1 in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

TNF-α converting enzyme (TACE, also known as ADAM17) is a zinc metalloprotease that cleaves the membrane-bound precursor of TNF-α to give the mature soluble form of TNF-α.[1,2] It also mediates the proteolytic release of several other cell-surface proteins, including TNF-α receptors (TNFRs). TAPI-1, known in the earlier literature as just TAPI, is an inhibitor of TACE that inhibits the cleavage of TNF-α, TNFRI (p60), and TNFRII (p80) with IC_{50} values ranging from 5-100 µM.[1,3,4] It also blocks the shedding of other TACE-dependent proteins, including IL-6R and Klotho, and may inhibit metalloproteases other than TACE.[2,5,6] TAPI-1 differs from TAPI-0 (Item No. 14694), structurally, by the presence of an aminoethyl addition at the alanyl group, and is generally more stable in tissue culture and *in vivo*.

References

1. Mohler, K.M., Sleath, P.R., Fitzner, J.N., *et al. Nature* **370(6486)**, 218-220 (1994).
2. Müllberg, J., Durie, F.H., Otten-Evans, C., *et al. J. Immunol.* **155(11)**, 5198-5205 (1995).
3. Crowe, P.D., Walter, B.N., Mohler, K.M., *et al. A J. Exp. Med.* **181(3)**, 1502-1210 (1995).
4. Hooper, N.M., Karran, E.H., and Turner, A.J. *Biochem. J.* **321(2)**, 265-279 (1997).
5. Chen, C.-D., Podvin, S., Gillespie, E., *et al. Proc. Natl. Acad. Sci. USA* **104(50)**, 19796-19801 (2007).
6. Yamamoto, K., Miyazaki, K., and Higashi, S. *FEBS J.* **281(15)**, 3346-3356 (2014).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM