

**TOCRIS** 

# **Certificate of Analysis**

Print Date: Feb 23rd 2024

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Product Name: TAPI 2 Catalog No.: 6013 Batch No.: 5

CAS Number: 689284-12-6

 $IUPAC\ Name: \ N-[(2R)-2-[2-(Hydroxyamino)-2-oxoethyl]-4-methyl-1-oxopentyl]-3-methyl-L-valyl-N-(2-aminoethyl)-L-alaninamide$ 

#### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:**  $C_{19}H_{37}N_5O_5$  **Batch Molecular Weight:** 415.54

Physical Appearance: lyophilised solid

Net Peptide Content: 59%
Counter Ion: Acetate

Storage: Store at -20°C

Peptide Sequence:

# 2. ANALYTICAL DATA

HPLC: Shows 97.1% purity

Mass Spectrum: Consistent with structure

#### 3. AMINO ACID ANALYSIS DATA

# Amino Acid Theoretical Actual Amino Acid Theoretical Actual

Ala	1.00	1.00	Lys
Arg			Met
Asx			Phe
Cys			Pro
Glx			Ser
Gly			Thr
His			Trp
lle			Tyr
Leu			Val

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use



# **Product Information**

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#### **Description:**

TAPI 2 is an ADAM-17 (TACE) and MMP inhibitor ( $K_i$  = 120 nM at ADAM-17). Sensitizes cancer stem cells to the lethal effects of 5-FU in vitro. Blocks shedding of TNF- $\alpha$  from cell membranes. This product is typically reconstituted in water.

#### **Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>19</sub>H<sub>37</sub>N<sub>5</sub>O<sub>5</sub> Batch Molecular Weight: 415.54 Physical Appearance: lyophilised solid

#### **Peptide Sequence:**

Storage: Store at -20°C

# Solubility & Usage Info:

Most peptides are soluble in distilled water. If the peptide does not completely dissolve addition of 0.1M acetic acid (those containing Arg, Lys, His) or 0.1M ammonia (those containing Asp, Glu) may help. Occasionally 10% DMSO or DMF may be required for extremely insoluble peptides. In addition to these measures sonification may also be helpful.

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved. This product is supplied in gross weight.

**Net Peptide Content:** 59% (Remaining weight made up of counterions and residual water).

Counter Ion: Acetate

#### Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such Cys, Met,Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2  $\mu$ m filter to remove potential bacterial contamination whenever possible.

#### References:

Wang et al (2016) A disintegrin and metalloproteinase domain 17 regulates colorectal cancer stem cells and chemosensitivity via notch1 signaling. Stem Cells Transl.Med. 5 331. PMID: 26744411.

Moss et al (2007) Fluorescent substrates for the proteinases ADAM17, ADAM10, ADAM8, and ADAM12 useful for high-throughput inhibitor screening. Anal.Biochem. 366 144. PMID: 17548045.

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