

**Product Name:** TFRGAP-NH<sub>2</sub>

**Catalog No.:** 7742

**Batch No.:** 1

CAS Number: 1872435-09-0

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>29</sub>H<sub>46</sub>N<sub>10</sub>O<sub>7</sub>  
**Batch Molecular Weight:** 646.75  
**Physical Appearance:** White lyophilised solid  
**Counter Ion:** Trifluoroacetate  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Store at -20°C  
**Peptide Sequence:** Thr-Phe-Arg-Gly-Ala-Pro-NH<sub>2</sub>

**2. ANALYTICAL DATA**

**HPLC:** Shows 97.6% purity  
**Mass Spectrum:** Consistent with structure

**3. AMINO ACID ANALYSIS DATA**

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala	1.00	0.98	Lys				
Arg	1.00	1.00	Met				
Asx			Phe	1.00	1.00		
Cys			Pro	1.00	1.01		
Glx			Ser				
Gly	1.00	1.01	Thr	1.00	0.86		
His			Trp				
Ile			Tyr				
Leu			Val				

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

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**Product Name:** TFRGAP-NH<sub>2</sub>

**Catalog No.:** 7742

**1**

CAS Number: 1872435-09-0

**Description:**

TFRGAP-NH<sub>2</sub> is a protease-activated receptor 3 (PAR3) peptide agonist. In vitro, it increases the expression of heme oxygenase (HO)-1 in osteoarthritis synovial fibroblasts (OASFs).

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>29</sub>H<sub>46</sub>N<sub>10</sub>O<sub>7</sub>

Batch Molecular Weight: 646.75

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Thr-Phe-Arg-Gly-Ala-Pro-NH<sub>2</sub>

**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 1 mg/ml in water

This product is supplied as a lyophilized solid and may 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.

**Counter Ion:** Trifluoroacetate

**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 as 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 µm filter to remove potential bacterial contamination whenever possible.

**References:**

Iyer *et al* (2021) PAR2 activation on human kidney tubular epithelial cells induces tissue factor synthesis, that enhances blood clotting. *Front Physiol.* **12** 615428. PMID: 33776786.

Subramaniam *et al* (2021) A thrombin-PAR1/2 feedback loop amplifies thromboinflammatory endothelial responses to the viral RNA analogue poly(I:C). *Blood Adv.* **5** 2760. PMID: 34242391.

Yu *et al* (2021) Tumor-associated macrophages (TAMs) depend on MMP1 for their cancer-promoting role. *Cell Death Discov.* **7** 343. PMID: 34753916.

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