

Certificate of Analysis

Product Name: PMX 205
CAS Number: 514814-49-4

Catalog No.: 5196 **Batch No.:** 14

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄₅H₆₂N₁₀O₆
Batch Molecular Weight: 839.05
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water with sonication
Storage: Store at -20°C
Peptide Sequence: Cyclo[N²-(1-Oxo-3-phenylpropyl)-Orn-Pro-D-Cha-Trp-Arg]

2. ANALYTICAL DATA

HPLC: Shows 99.2% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala				Lys			
Arg	1.00	0.98		Met			
Asx				Phe			
Cys				Pro	1.00	1.02	
Glx				Ser			
Gly				Thr			
His				Trp	1.00	Not Detected	
Ile				Tyr			
Leu				Val			

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

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Description:

PMX 205 is a potent C5a receptor peptide antagonist (IC₅₀ = 31 nM). Ameliorates experimentally-induced colon inflammation in mice. Reduces fibrillar amyloid deposits, decreases hyperphosphorylated tau levels and rescues cognitive function in a mouse model of Alzheimer's disease. Also improves hindlimb grip strength and slows disease progression in the hSOD1^{G93A} mouse model of amyotrophic lateral sclerosis. Orally active and brain penetrant.

Physical and Chemical Properties:

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Batch Molecular Weight: 839.05

Physical Appearance: White lyophilised solid

Peptide Sequence:

Cyclo[N²-(1-Oxo-3-phenylpropyl)-Orn-Pro-D-Cha-Trp-Arg]

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 1 mg/ml in water with sonication

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.

Counter Ion: TFA

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:

Kumar et al (2018) Development and validation of a LC-MS/MS assay for pharmacokinetic studies of complement C5a receptor antagonists PMX53 and PMX205 in mice. *Sci.Rep.* **8** 8101. PMID: 29802264 .

Lee et al (2017) Pharmacological inhibition of complement C5a-C5a₁ receptor signalling ameliorates disease pathology in the hSOD1^{G93A} mouse model of amyotrophic lateral sclerosis. *Br.J.Pharmacol.* **174** 689. PMID: 28128456.

Jain et al (2013) The C5a receptor antagonist PMX205 ameliorates experimentally induced colitis associated with increased IL-4 and IL-10. *Br.J.Pharmacol.* **168** 488. PMID: 22924972.

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