bio-techne
TOCRIS

Print Date: Feb 25th 2025

Certificate of Analysis

www.tocris.com

Product Name: **PMX 53** **Catalog No.: 5473** **Batch No.: 9**

CAS Number: 219639-75-5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{47}H_{65}N_{11}O_7$

Batch Molecular Weight: 896.1

Physical Appearance: White lyophilised solid

Counter Ion: TFA

Solubility: Soluble to 2 mg/ml in water

Storage: Store at -20°C

Peptide Sequence: Ac-Phe-cyclo(Orn-Pro-D-Cha-Trp-Arg)

2. ANALYTICAL DATA

HPLC: Shows 98.5% purity

Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid	Theoretical	Actual	Amino Acid	Theoretical	Actual
Ala			Lys		
Arg	1.00	1.01	Met		
Asx			Phe	1.00	0.98
Cys			Pro	1.00	1.01
Glx			Ser		
Gly			Thr		
His			Trp	1.00	Not Detected
Ile			Tyr		
Leu			Val		

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Name: **PMX 53** **Catalog No.: 5473** **Batch No.: 9**

CAS Number: 219639-75-5

Description:

PMX 53 is a potent C5a receptor antagonist (IC_{50} = 20 nM). Also MrgX2 agonist. Stimulates MrgX2-mediated mast cell degranulation. Also inhibits C5a-induced hypernociception in rats, inhibits lung metastasis in a mouse breast cancer model and reduces atherosclerotic lesions in a mouse model of atherosclerosis. Negative Control also available.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{47}H_{65}N_{11}O_7$

Batch Molecular Weight: 896.1

Physical Appearance: White lyophilised solid

Peptide Sequence:

Ac-Phe-cyclo(Orn-Pro-D-Cha-Trp-Arg)

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in water

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 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 .

Vadrevu *et al* (2014) Complement c5a receptor facilitates cancer metastasis by altering T-cell responses in the metastatic niche. Cancer Res. ***74*** 3454. PMID: 24786787.

Manthey *et al* (2011) Complement C5a inhibition reduces atherosclerosis in ApoE-/- mice. FASEB J ***25*** 2447. PMID: 21490292.