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TOCRIS

Print Date: Sep 3rd 2024

Certificate of Analysis

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Product Name: **QWF** **Catalog No.: 6642** **Batch No.: 9**

CAS Number: 126088-82-2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	$C_{38}H_{43}N_5O_8$
Batch Molecular Weight:	697.78
Physical Appearance:	White lyophilised solid
Solubility:	Soluble to 10 mg/ml in DMSO
Storage:	Store at -20°C
Peptide Sequence:	Boc-Gln-D-Trp(Formyl)-Phe-OBzl

2. ANALYTICAL DATA

HPLC:	Shows 99.0 % purity
Mass Spectrum:	Consistent with structure

3. AMINO ACID ANALYSIS DATA

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

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Product Name: **QWF** **Catalog No.: 6642** **9**

CAS Number: 126088-82-2

Description:

QWF is a tripeptide substance P (SP) antagonist (IC_{50} = 90 µM). Also inhibits binding of SP to Mas-related GPCR (MRGPR) X2. Inhibits SP-induced IgE-independent degranulation of mast cells in vitro. Inhibits compound 48/80-induced MRGPRX2 activation and scratching in mice in vivo. For more information about how QWF may be used, see our protocol: 3D Culture of Lung Alveolar Cells

Physical and Chemical Properties:

Batch Molecular Formula: $C_{38}H_{43}N_5O_8$

Batch Molecular Weight: 697.78

Physical Appearance: White lyophilised solid

Peptide Sequence:

Boc-Gln-D-Trp(Formyl)-Phe-OBzl

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 10 mg/ml in DMSO

This product is supplied in gross weight.

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:

Azimi *et al* (2016) Dual action of neurokinin-1 antagonists on Mas-related GPCRs. JCI Insight. ***1*** e89362. PMID: 27734033.

Hagiwara *et al* (1992) Studies on neurokinin antagonists. 1. The design of novel tripeptides possessing the glutaminyl-D-tryptophylphenylalanine sequence as substance P antagonists. J.Med.Chem. ***35*** 2015. PMID: 1375965.