

# Certificate of Analysis

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**Product Name:** QWF  
CAS Number: 126088-82-2

**Catalog No.:** 6642      **Batch No.:** 4

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>38</sub>H<sub>43</sub>N<sub>5</sub>O<sub>8</sub>  
**Batch Molecular Weight:** 697.78  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 89%  
**Counter Ion:** N/A  
**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 92% 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		1.01
Cys				Pro			
Glx	1.00		0.99	Ser			
Gly				Thr			
His				Trp	1.00		Detected
Ile				Tyr			
Leu				Val			

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

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**Description:**

QWF is a tripeptide substance P (SP) antagonist (IC<sub>50</sub> = 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.

**Physical and Chemical Properties:**

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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.

**Net Peptide Content:** 89% (Remaining weight made up of counterions and residual water).

**Counter Ion:** N/A

**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:**

**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 glutaminy-D-tryptophylphenylalanine sequence as substance P antagonists. *J.Med.Chem.* **35** 2015. PMID: 1375965.

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