

Certificate of Analysis

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Product Name: GRK2i
CAS Number: 148505-03-7

Catalog No.: 3594 **Batch No.:** 6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅₃H₂₅₆N₅₀O₄₁S
Batch Molecular Weight: 3484.08
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Trp-Lys-Lys-Glu-Leu-Arg-Asp-Ala-Tyr-Arg-Glu-Ala-Gln-Gln-Leu-Val-Gln-Arg-Val-Pro-Lys-Met-Lys-Asn-Lys-Pro-Arg-Ser

2. ANALYTICAL DATA

HPLC: Shows 98.8% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical Actual			Amino Acid Theoretical Actual		
Ala	2.00	1.87	Lys	5.00	4.93
Arg	4.00	4.01	Met	1.00	0.97
Asx	2.00	2.01	Phe		
Cys			Pro	2.00	2.03
Glx	5.00	5.02	Ser	1.00	1.02
Gly			Thr		
His			Trp	1.00	Detected
Ile			Tyr	1.00	1.05
Leu	2.00	1.91	Val	2.00	1.96

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

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Product Name: GRK2i
CAS Number: 148505-03-7

Catalog No.: 3594 **6**

Description:

GRK2i is a GRK2 inhibitory polypeptide that specifically inhibits Gβγ activation of GRK2. Corresponds to the Gβγ-binding domain and acts as a cellular Gβγ antagonist.

Physical and Chemical Properties:

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Peptide Sequence:

Trp-Lys-Lys-Glu-Leu-Arg-Asp-Ala-Tyr-Arg-
Glu-Ala-Gln-Gln-Leu-Val-Gln-Arg-Val-Pro-
Lys-Met-Lys-Asn-Lys-Pro-Arg-Ser

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 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:

- Dang *et al*** (2009) Two distinct mechanisms mediate acute µ-opioid receptor desensitization in native neurons. *J.Neurosci.* **29** 3322. PMID: 19279269.
- Macrez *et al*** (1997) A βγ dimer derived from G₁₃ transduces the angiotensin AT₁ receptor signal to stimulation of Ca²⁺ channels in rat portal vein myocytes. *J.Biol.Chem.* **272** 23180. PMID: 9287322.
- Koch *et al*** (1994) Cellular expression of the carboxyl terminus of a G protein-coupled receptor kinase attenuates G_{βγ}-mediated signaling. *J.Biol.Chem.* **269** 6193. PMID: 8119963.

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