

## Certificate of Analysis

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**Product Name:** pep2-SVKI  
**CAS Number:** 328944-75-8

**Catalog No.:** 1597      **Batch No.:** 3

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>60</sub>H<sub>93</sub>N<sub>13</sub>O<sub>18</sub>  
**Batch Molecular Weight:** 1284.47  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 84%  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Desiccate at -20°C  
**Peptide Sequence:** Tyr-Asn-Val-Tyr-Gly-Ile-Glu-Ser-Val-Lys-Ile

### 2. ANALYTICAL DATA

**HPLC:** Shows >95% purity  
**Mass Spectrum:** Consistent with structure

### 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	Amino Acid Theoretical		Actual
Ala			Lys	1.00	1.07
Arg			Met		
Asx	1.00	0.98	Phe		
Cys			Pro		
Glx	1.00	1.04	Ser	1.00	1.04
Gly	1.00	1.04	Thr		
His			Trp		
Ile	2.00	2.11	Tyr	2.00	2.03
Leu			Val	2.00	1.90

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**Description:**

Inhibitor peptide corresponding to last 10 amino acids of the C-terminus of the GluA2 AMPA receptor subunit. Disrupts binding of GluA2 (at the C-terminal PDZ site) with glutamate receptor interacting protein (GRIP), AMPA receptor binding protein (ABP) and protein interacting with C kinase (PICK1). Increases amplitude of AMPA receptor-mediated currents and blocks long-term depression (LTD). Control Peptide also available.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>60</sub>H<sub>93</sub>N<sub>13</sub>O<sub>18</sub>

Batch Molecular Weight: 1284.47

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Tyr-Asn-Val-Tyr-Gly-Ile-Glu-Ser-Val-Lys-Ile

**Storage:** Desiccate at -20°C

**Solubility & Usage Info:**

Soluble to 1 mg/ml in water

This product is supplied as a lyophilized solid and may 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.

**Net Peptide Content:** 84% (Remaining weight made up of counterions and residual water).

**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:**

**Collingridge and Isaac** (2003) Functional roles of protein interactions with AMPA and kainate receptors. *Neurosci.Res.* **47** 3. PMID: 12941441.

**Kim et al** (2001) Interaction of the AMPA receptor subunit GluR2/3 with PDZ domains regulates hippocampal long-term depression. *Proc.Natl.Acad.Sci.U.S.A.* **98** 11725. PMID: 11573007.

**Daw et al** (2000) PDZ proteins interacting with C-terminal GluR2/3 are involved in a PKC-dependent regulation of AMPA receptors at hippocampal synapses. *Neuron* **28** 873. PMID: 11163273.

**Li et al** (1999) AMPA receptor-PDZ interactions in facilitation of spinal sensory synapses. *Nat.Neurosci.* **2** 972. PMID: 10526335.

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