

## Certificate of Analysis

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**Product Name:** GLYX 13  
CAS Number: 117928-94-6

**Catalog No.:** 3406      **Batch No.:** 3

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>18</sub>H<sub>31</sub>N<sub>5</sub>O<sub>6</sub>  
**Batch Molecular Weight:** 413.47  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 72%  
**Counter Ion:** TFA  
**Solubility:** Soluble to 2 mg/ml in water  
**Storage:** Store at -20°C  
**Peptide Sequence:** Thr-Pro-Pro-Thr-NH<sub>2</sub>

### 2. ANALYTICAL DATA

**HPLC:** Shows 96.6% 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		
Cys			Pro	2.00	1.95
Glx			Ser		
Gly			Thr	2.00	2.05
His			Trp		
Ile			Tyr		
Leu			Val		

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

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CAS Number: 117928-94-6

**Description:**

NMDA receptor partial agonist that acts at the glycine site. Simultaneously acts as a promoter of the induction of long-term potentiation (LTP) and as a suppressor of long-term depression (LTD). Exhibits nootropic, neuroprotective and antinociceptive activity, and enhances learning, memory and cognition in vivo. Brain penetrant.

**Physical and Chemical Properties:**Batch Molecular Formula: C<sub>18</sub>H<sub>31</sub>N<sub>5</sub>O<sub>6</sub>

Batch Molecular Weight: 413.47

Physical Appearance: White lyophilised solid

**Peptide Sequence:**Thr-Pro-Pro-Thr-NH<sub>2</sub>**Storage:** Store at -20°C**Solubility & Usage Info:**

Soluble to 2 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:** 72% (Remaining weight made up of counterions and residual water).**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:**

**Burgdorf et al** (2009) The N-MthD.-aspartate receptor modulator GLYX-13 enhances learning and memory, in young adult and learning impaired aging rats. *Neurobiol.Aging* **32** 698. PMID: 19446371.

**Wood et al** (2008) Antinociceptive action of GLYX-13: a N-MthD.-aspartate receptor glycine site partial agonist. *Neuroreport*. **19** 1059. PMID: 18580579.

**Zhang et al** (2008) A NMDA receptor glycine site partial agonist, GLYX-13, simultaneously enhances LTP and reduces LTD at Schaffer collateral-CA1 synapses in hippocampus. **55** 1238. PMID: 18796308.

**Moskal et al** (2005) GLYX-13: A monoclonal antibody-derived peptide that acts as an N-MthD.-aspartate receptor modulator. *Neuropharmacology* **49** 1077. PMID: 16051282.

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