

Certificate of Analysis

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

Catalog No.: 3406 **Batch No.:** 5

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₃₁N₅O₆
Batch Molecular Weight: 413.47
Physical Appearance: White lyophilised solid
Counter Ion: TFA
Solubility: Soluble to 2 mg/ml in water
Storage: Store at -20°C
Peptide Sequence: Thr-Pro-Pro-Thr-NH₂

2. ANALYTICAL DATA

HPLC: Shows 99.1% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	
Ala	Lys		
Arg	Met		
Asx	Phe		
Cys	Pro	2.00	1.98
Glx	Ser		
Gly	Thr	2.00	2.02
His	Trp		
Ile	Tyr		
Leu	Val		

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

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Description:

GLYX 13 is a 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). Also promotes VGF and BDNF release and increases ERK/mTOR signaling. Exhibits nootropic, neuroprotective and antinociceptive activity, and enhances learning, memory and cognition in vivo. Brain penetrant.

Physical and Chemical Properties:Batch Molecular Formula: C₁₈H₃₁N₅O₆

Batch Molecular Weight: 413.47

Physical Appearance: White lyophilised solid

Peptide Sequence:Thr-Pro-Pro-Thr-NH₂**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:

Shen et al (2022) ERK/mTOR signaling may underlying the antidepressant actions of rapastinel in mice. *Transl.Psychiatry* **12** 522. PMID: 36550125.

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.

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