

Certificate of Analysis

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Product Name: CHIPOpt

Catalog No.: 8044

Batch No.: 1

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₉H₄₇N₇O₉
Batch Molecular Weight: 757.84
Physical Appearance: White lyophilised solid
Counter Ion: Acetate
Solubility: Soluble to 2 mg/ml in 0.01M PBS
Storage: Store at -20°C
Peptide Sequence: Ac-Leu-Trp-Trp-Pro-Asp

2. ANALYTICAL DATA

HPLC: Shows 99.5% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical			Actual		
Ala			Lys		
Arg			Met		
Asx	1.00	0.99	Phe		
Cys			Pro	1.00	0.99
Glx			Ser		
Gly			Thr		
His			Trp	2.00	Not Detected
Ile			Tyr		
Leu	1.00	1.02	Val		

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

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Description:

CHIPOpt is a CHIP/STUB1 E3 ligase inhibitor. In vitro, CHIPOpt decreases phosphorylated tau ubiquitination, with little effect on unmodified tau. In Thioflavin T assays, CHIPOpt inhibits the ability of CHIP to suppress phosphorylated tau aggregation. FITC-CHIPOpt (Cat. No. 8045), a fluorescent CHIPOpt, is also available.

Physical and Chemical Properties:

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Batch Molecular Weight: 757.84

Physical Appearance: White lyophilised solid

Peptide Sequence:

Ac-Leu-Trp-Trp-Pro-Asp

Storage: Store at -20°C

Solubility & Usage Info:

Soluble to 2 mg/ml in 0.01M PBS

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: Acetate

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:

Nadel *et al* (2023) The E3 ubiquitin ligase, CHIP/STUB1, inhibits aggregation of phosphorylated proteoforms of microtubule-associated protein tau (MAPT). *J.Mol.Biol.* **435** 168026. PMID: 37330289.

Ravalin *et al* (2019) Specificity for latent C termini links the E3 ubiquitin ligase CHIP to caspases. *Nat.Chem.Biol.* **15** 786. PMID: 31320752.

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