

# Certificate of Analysis

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**Product Name:** DAPTA  
**CAS Number:** 106362-34-9

**Catalog No.:** 2423 **Batch No.:** 4

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>35</sub>H<sub>56</sub>N<sub>10</sub>O<sub>15</sub>  
**Batch Molecular Weight:** 856.89  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 84%  
**Counter Ion:** TFA  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Desiccate at -20°C  
**Peptide Sequence:** D-Ala-Ser-Thr-Thr-Thr-Asn-Tyr-Thr-NH<sub>2</sub>

## 2. ANALYTICAL DATA

**HPLC:** Shows 99% purity  
**Mass Spectrum:** Consistent with structure

## 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual	Amino Acid Theoretical		Actual
Ala	1.00	0.96	Lys		
Arg			Met		
Asx	1.00	0.98	Phe		
Cys			Pro		
Glx			Ser	1.00	0.95
Gly			Thr	4.00	3.68
His			Trp		
Ile			Tyr	1.00	1.10
Leu			Val		

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

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**Product Name:** DAPTA

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**4**

CAS Number: 106362-34-9

**Description:**

DAPTA is a chemokine receptor 5 (CCR5) antagonist. Acts as a selective viral entry inhibitor for R5 tropic HIV-1 strains. Blocks CCR5-mediated monocyte chemotaxis and reduces microglia and astrocyte activation in a neuroinflammatory rat model of Alzheimer's disease.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>35</sub>H<sub>56</sub>N<sub>10</sub>O<sub>15</sub>

Batch Molecular Weight: 856.89

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

D-Ala-Ser-Thr-Thr-Thr-Asn-Tyr-Thr-NH<sub>2</sub>

**Storage:** Desiccate at -20°C

**Solubility & Usage Info:**

Soluble to 1 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.

**Net Peptide Content:** 84% (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:**

**Polianova et al** (2005) Chemokine receptor-5 (CCR5) is a receptor for the HIV entry inhibitor peptide T (DAPTA). *Antiviral Res.* **67** 83. PMID: 16002156.

**Rosi et al** (2005) Chemokine receptor 5 antagonist D-Ala-peptide T-amide reduces microglia and astrocyte activation within the hippocampus in a neuroinflammatory rat model of Alzheimer's disease. *Neuroscience* **134** 671. PMID: 15979806.

**Ruff et al** (2003) Update on D-ala-peptide T-amide (DAPTA): a viral entry inhibitor that blocks CCR5 chemokine receptors. *Curr.HIV.Res.* **1** 51. PMID: 15043212.

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