

## Certificate of Analysis

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**Product Name:** d[Cha<sup>4</sup>]-AVP

**Catalog No.:** 3126

**Batch No.:** 2

CAS Number: 500170-27-4

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>50</sub>H<sub>71</sub>N<sub>13</sub>O<sub>11</sub>S<sub>2</sub>  
**Batch Molecular Weight:** 1094.31  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 79%  
**Counter Ion:** TFA  
**Solubility:** Soluble to 1 mg/ml in water  
**Storage:** Store at -20°C  
**Peptide Sequence:** Mpr-Tyr-Phe-Cha-Asn-Cys-Pro-Arg-Gly-NH<sub>2</sub>

### 2. ANALYTICAL DATA

**HPLC:** Shows 97.7% purity  
**Mass Spectrum:** Consistent with structure

### 3. AMINO ACID ANALYSIS DATA

Amino Acid		Theoretical	Actual	Amino Acid		Theoretical	Actual
Ala				Lys			
Arg	1.00	1.03	Met				
Asx	1.00	0.99	Phe	1.00	0.99		
Cys			Pro	1.00	1.15		
Glx			Ser				
Gly	1.00	1.01	Thr				
His			Trp				
Ile			Tyr	1.00	0.97		
Leu			Val				

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

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**Product Name:** d[Cha<sup>4</sup>]-AVP

**Catalog No.:** 3126

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CAS Number: 500170-27-4

**Description:**

Potent and selective human vasopressin V<sub>1B</sub> receptor agonist (K<sub>i</sub> values are 1.2, 151, 240 and 750 nM for V<sub>1B</sub>, V<sub>1A</sub>, Oxytocin and V<sub>2</sub> receptors respectively). Stimulates ACTH and corticosterone secretion and exhibits negligible vasopressor activity in vivo.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>50</sub>H<sub>71</sub>N<sub>13</sub>O<sub>11</sub>S<sub>2</sub>

Batch Molecular Weight: 1094.31

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Mpr-Tyr-Phe-Cha-Asn-Cys-Pro-Arg-Gly-NH<sub>2</sub>

**Storage:** Store 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:** 79% (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:**

**Pena et al** (2007) Design and synthesis of the first selective agonists for the rat vasopressin V<sub>1b</sub> receptor: based on modifications of deamino-[cys<sup>1</sup>]arginine vasopressin at positions 4 and 8. *J.Med.Chem.* **50** 835. PMID: 17300166.

**Cheng et al** (2004) Design of potent and selective agonists for the human vasopressin V<sub>1b</sub> receptor based on modifications of [deamino-cys<sup>1</sup>]arginine vasopressin at position 4. *J.Med.Chem.* **47** 2375. PMID: 15084136.

**Derick et al** (2002) [1-Deamino-4-cyclohexylalanine] arginine vasopressin: a potent and specific agonist for vasopressin V<sub>1b</sub> receptors. *Endocrinology* **143** 4655. PMID: 12446593.

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