

# Certificate of Analysis

[www.tocris.com](http://www.tocris.com)

**Product Name:** DAMGO

**Catalog No.:** 1171

**Batch No.:** 37

CAS Number: 78123-71-4

IUPAC Name: [D-Ala<sup>2</sup>, NMe-Phe<sup>4</sup>, Gly-ol<sup>6</sup>]-enkephalin

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>26</sub>H<sub>35</sub>N<sub>5</sub>O<sub>6</sub>  
**Batch Molecular Weight:** 513.7  
**Physical Appearance:** White lyophilised solid  
**Counter Ion:** TFA  
**Solubility:** Soluble to 2 mg/ml in water  
**Storage:** Store at -20°C  
**Peptide Sequence:** Tyr-D-Ala-Gly-NMe-Phe-Gly-ol

## 2. ANALYTICAL DATA

**HPLC:** Shows 98.2% 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				Phe			
Cys				Pro			
Glx				Ser			
Gly		1.00	1.00	Thr			
His				Trp			
Ile				Tyr	1.00	1.04	
Leu				Val			

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

**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

[www.tocris.com/distributors](http://www.tocris.com/distributors)

Tel: +1 612 379 2956

**Product Name:** DAMGO**Catalog No.:** 1171**Batch No.:** 37

CAS Number: 78123-71-4

IUPAC Name: [D-Ala<sup>2</sup>, NMe-Phe<sup>4</sup>, Gly-ol<sup>5</sup>]-enkephalin**Description:**

DAMGO is a highly selective peptide agonist for the  $\mu$  opioid receptor.

**Physical and Chemical Properties:**Batch Molecular Formula: C<sub>26</sub>H<sub>35</sub>N<sub>5</sub>O<sub>6</sub>

Batch Molecular Weight: 513.7

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Tyr-D-Ala-Gly-NMe-Phe-Gly-ol

**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  $\mu$ m filter to remove potential bacterial contamination whenever possible.

**References:**

**Fang *et al*** (1989) Opioid receptors (DAGO-enkephalin, dynorphin A(1-13), BAM 22P) microinjected into the rat brainstem: comparison of their antinociceptive effect and their effect on neuronal firing in the rostral ventromedial medulla. *Brain Res.* **501** 116. PMID: 2572306.

**Hirning *et al*** (1985) Studies in vitro with ICI 174,864, [D-Pen<sup>2</sup>,D-Pen<sup>5</sup>]-enkephalin (DPDPE) and [D-Ala<sup>2</sup>,NMePhe<sup>4</sup>,Gly-ol]-enkephalin (DAGO). *Neuropeptides* **5** 383. PMID: 2987739.

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

**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel:+1 612 379 2956