

Product Name: CRF (human, rat)

Catalog No.: 1151

Batch No.: 31

CAS Number: 86784-80-7

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀₈H₃₄₄N₆₀O₆₃S₂
Batch Molecular Weight: 4758
Physical Appearance: White lyophilised solid
Net Peptide Content: 75.5%
Counter Ion: TFA
Solubility: Soluble to 1.10 mg/ml in water
Storage: Desiccate at -20°C
Peptide Sequence: Ser-Glu-Glu-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Met-Ala-Arg-Ala-Glu-Gln-Leu-Ala-Gln-Gln-Ala-His-Ser-Asn-Arg-Lys-Leu-Met-Glu-Ile-Ile-NH₂

2. ANALYTICAL DATA

HPLC: Shows 95.2% purity
Mass Spectrum: Consistent with structure

3. AMINO ACID ANALYSIS DATA

| Amino Acid | | Theoretical | Actual | Amino Acid | | Theoretical | Actual |
|------------|------|-------------|--------|------------|------|-------------|--------|
| Ala | 4.00 | 3.86 | Lys | 1.00 | 1.05 | | |
| Arg | 3.00 | 2.74 | Met | 2.00 | 1.92 | | |
| Asx | 2.00 | 2.00 | Phe | 1.00 | 1.03 | | |
| Cys | | | Pro | 2.00 | 2.01 | | |
| Glx | 9.00 | 9.23 | Ser | 3.00 | 2.38 | | |
| Gly | | | Thr | 1.00 | 0.89 | | |
| His | 2.00 | 2.11 | Trp | | | | |
| Ile | 3.00 | 2.70 | Tyr | | | | |
| Leu | 7.00 | 6.89 | Val | 1.00 | 1.06 | | |

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

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Description:

Endogenous peptide agonist for the CRF receptor (K_i values are 11, 44 and 38 nM for hCRF₁, rCRF_{2a} and mCRF_{2b} respectively). Stimulates the synthesis and release of ACTH from the anterior pituitary.

Physical and Chemical Properties:

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Batch Molecular Weight: 4758

Physical Appearance: White lyophilised solid

Peptide Sequence:

Ser-Glu-Glu-Pro-Pro-Ile-Ser-Leu-Asp-Leu-
Thr-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-
Met-Ala-Arg-Ala-Glu-Gln-Leu-Ala-Gln-Gln-Ala-
His-Ser-Asn-Arg-Lys-Leu-Met-Glu-Ile-Ile-NH₂

Storage: Desiccate at -20°C

Solubility & Usage Info:

Soluble to 1.10 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: 75.5% (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.

Licensing Information:

Sold with the permission of the SALK Institute

References:

Perrin et al (1999) Comparison of an agonist, urocortin, and an antagonist, astressin, as radioligands for characterization of corticotropin-releasing factor receptors. *J.Pharmacol.Exp.Ther.* **288** 729. PMID: 9918582.

Perrin and Vale (1999) Corticotropin releasing factor receptors and their ligand family. *Ann.N.Y.Acad.Sci.* **885** 312. PMID: 10816663.

Rivier et al (1986) Mediation by corticotropin releasing factor (CRF) of adenohipophysial hormone secretion. *Annu.Rev.Physiol.* **48** 475. PMID: 2871808.

Souza et al (1984) Corticotropin-releasing factor receptors in rat forebrain: autoradiographic identification. *Science* **224** 1449. PMID: 6328656.

Tache et al (1983) Inhibition of gastric acid secretion in rats by intracerebral injection of corticotropin-releasing factor. *Science* **222** 935. PMID: 6415815.

Vale et al (1981) Characterization of a 41-residue ovine hypothalamic peptide that stimulates secretion of corticotropin and β-endorphin. *Science* **213** 1394. PMID: 6267699.

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