

Certificate of Analysis

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Product Name: Echistatin, α 1 isoform

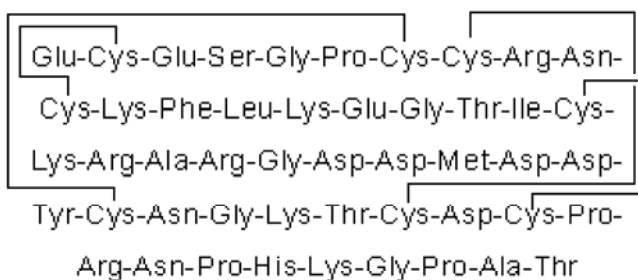
Catalog No.: 3202

Batch No.: 8

CAS Number: 154303-05-6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₁₇H₃₄₁N₇₁O₇₄S₉
Batch Molecular Weight: 5417.1
Physical Appearance: White solid
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence:



2. ANALYTICAL DATA

HPLC: Shows 97.1% purity
Mass Spectrum: Consistent with structure

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

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Catalog No.: 3202

Batch No.: 8

CAS Number: 154303-05-6

Description:

Echistatin, $\alpha 1$ isoform is a potent irreversible $\alpha_v\beta_3$ integrin antagonist ($K_i = 0.27$ nM). Disrupts attachment of osteoclasts to bone and inhibits bone reabsorption ($IC_{50} = 0.1$ nM). Prevents ADP-induced platelet aggregation via inhibition of glycoprotein IIb/IIIa (GpIIb/IIIa, $\alpha_{IIb}\beta_3$) receptors ($IC_{50} = 30$ nM) in vitro.

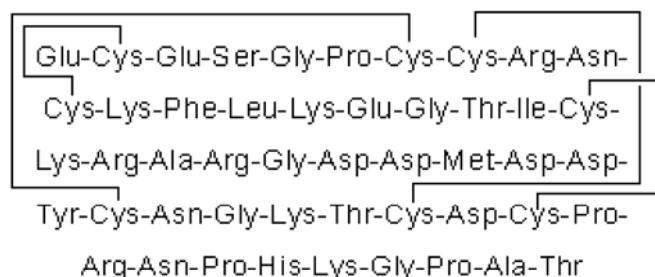
Physical and Chemical Properties:

Batch Molecular Formula: $C_{217}H_{341}N_{71}O_{74}S_9$

Batch Molecular Weight: 5417.1

Physical Appearance: White solid

Peptide Sequence:



Storage: Store at $-20^{\circ}C$

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.

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 $45-60^{\circ}C$ 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 $-20^{\circ}C$. 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:

Kumar et al (1997) Biochemical characteriation of the binding of echistatin to integrin $\alpha_v\beta_3$ receptor. J.Pharmacol.Exp.Ther. **283** 843. PMID: 9353406.

Musial et al (1990) Inhibition of platelet adhesion to surfaces of extracorporeal circuits by disintegrins RGD-containing peptides from viper venoms. Circulation **82** 261. PMID: 2364514.

Sato et al (1990) Echistatin is a potent inhibitor of bone resorption in culture. J.Cell.Biol. **111** 1713. PMID: 2211834.

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