

Product Information

Echistatin from *Echis carinatus*

Catalog Number **E1518**

Storage Temperature –20 °C

CAS RN 129038-42-2

Product Description

Echistatin is a polypeptide isolated from the venom of *Echis carinatus*, the saw-scaled viper, and is purified by a modification of a published method. The isolated echistatin, according to this method, is composed of two isoforms with molecular weights of 5.2-5.4 kDa; one isoform contains 47 amino acids and the other isoform contains 49 amino acids.¹ Echistatin has a native isoelectric point of 8.3.

Echistatin belongs to the disintegrin family of inhibitory proteins isolated from viper venom.² Disintegrins interact with integrins $\beta 1$ and $\beta 3$ and are characterized as low molecular weight, cysteine-rich peptides containing the Arg-Gly-Asp (RGD) sequence. They are the most potent known inhibitors of integrin function. Disintegrins interfere with cell adhesion to the extracellular matrix, including adhesion of melanoma cells and fibroblasts to fibronectin, and are potent inhibitors of platelet aggregation.^{3,4}

The product is essentially salt free, lyophilized and γ -irradiated. A vial will contain not less than 50 μ g of protein.

Purity: \geq 95% (SDS-PAGE)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Echistatin is soluble in water (0.1 mg/ml).

Storage/Stability

It is recommended to store the product desiccated at –20 °C.

References

1. Dennis, M.S., et al., Platelet glycoprotein IIb-IIIa protein antagonists from snake venoms: evidence for a family of platelet-aggregation inhibitors., Proc. Nat. Acad. Sci. USA, **87**, 2471-5 (1990).
2. Gould, R.J., et al., Disintegrins: a family of integrin inhibitory proteins from viper venoms., Proc. Soc. Exp. Biol. Med., **195**, 168-71 (1990).
3. Gan, Z.R., et al., Echistatin. A potent platelet aggregation inhibitor from the venom of the viper, *Echis carinatus*., J. Biol. Chem., **263**, 19827-32 (1988).
4. Garsky, V.M., et al., Chemical synthesis of echistatin, a potent inhibitor of platelet aggregation from *Echis carinatus*: synthesis and biological activity of selected analogs., Proc. Nat. Acad. Sci. USA, **86**, 4022-6 (1989).

EM,PHC 11/09-1

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications.

Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply.

Please see reverse side of the invoice or packing slip.