Overview

Synonyms	Hirudin ;
Description	Hirudin is a potent thrombin inhibitor originally derived from the medicinal leech Unlike heparin, hirudin act directly on thrombin, rather than through other clotting factors. They have a high binding affinity and specificity for thrombin. The mechanism of hirudin-thrombin binding appears to be unique. Recombinant hirudin variant is derived from yeast cell, the polypeptide containing 65 amino acid residues has a molecular weight of 6979.5 Da, which is identical to natural hirudin except for substitution of leucine for isoleucine at the N-terminal end of the molecule and the absence of a sulfate group on the tyrosine at position 63.
Source	*P. pastoris*
Biological Activity	The biological activity is determined by chromogenic assay, 1 unit is defined as the amount of Hirudin that neutralizes 1 unit of the WHO preparation 89/588 of thrombin. The specific activity is no less than 14,000 ATU/mg protein.
Sequence	VVYTDCTESG QNLCLCEGSN VCGQGNKCIL GSDGEKNQCV TGEGTPGPQS HNDGDFEEPE EYL

Properties

Measured Molecular Weight	Approximately 6.7 kDa, a single non-glycosylated polypeptide chain containing 63 amino acid residues.
Purity	> 96 % by SDS-PAGE and HPLC analyses.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM PBS, pH 7.0, containing 2 % mannitol.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at d -20 °C. Further dilutions should be made in appropriate buffered solutions.
Endotoxin Level	Less than 1 EU/µg of rHirudin as determined by LAL method.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Usage	This material is for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.
Storage	This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. **Avoid repeated freeze/thaw cycles.**

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