

Recombinant Hirudin

Certificate of Analysis and Data Sheet

➤ Source: Pichia Pasroris	➤ Catalog No. PRO-362
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➤ **Background :**

Recombinant Hirudin is a potent thrombin inhibitor originally derived from the medicinal leech. Unlike heparin, Hirudin acts directly on thrombin rather than through other clotting factors.

➤ **Description :**

Recombinant Hirudin is derived from yeast and the polypeptide chain contains 65 amino acids ,Mw is 6979.5 daltons. Recombinant Hirudin identical to natural Hirudin except for the 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. Recombinant Hirudin is purified by proprietary chromatographic techniques.

➤ **Physical Appearance:**

Sterile Filtered White lyophilized (freeze-dried) powder.

➤ **Formulation:**

Hirudin was lyophilized from a sterile solution containing no 20mM PBS pH-7 and 2% mannitol.

➤ **Solubility:**

It is recommended to reconstitute the lyophilized Hirudin in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

➤ **Stability:**

Lyophilized Hirudin although stable at room temperature for 3 weeks, should be stored desiccated below -18⁰C. Upon reconstitution Recombinant Hirudin should be stored at 4⁰C between 2-7 days and for future use below -18⁰C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Please avoid freeze-thaw cycles.

➤ **Purity:**

Greater than 95.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC.

(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

➤ **Biological Activity:**

The biological activity is measured using 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 was found to be 16,000ATU/mg protein.

➤ **Endotoxin:**

Less than 0.1 ng/μg (IEU/μg) of Hirudin.

➤ **Protein content**

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm.
2. Analysis by RP-HPLC.

➤ **Usage:**

This material is offered for research, laboratory or further evaluation purposes.