

## Hirudin

Cat. No. EXTC-187

Lot. No. (See product label)

### Introduction

**Description** Hirudin is a potent anticoagulant protein originally derived from the saliva of leeches (*Hirudo medicinalis*). It acts primarily by specifically inhibiting thrombin, an enzyme crucial in the blood coagulation cascade. Unlike other anticoagulants, such as heparin, hirudin works independently of cofactors and does not cause bleeding complications at therapeutic doses. This makes it a valuable agent in medical treatments that require controlled blood thinning.

**Applications** Hirudin is a versatile bioactive compound with a wide range of therapeutic applications, particularly in the fields of anticoagulation, cardiovascular health, diabetes management, and cancer treatment. Its ability to inhibit thrombin and improve circulation makes it a valuable tool in modern medicine.

**Synonyms** HIRUDIN(54-65)(DESULFATED);HIRUDINFRAGMENT54-65NON-SULFATED;H-GLY-ASP-PHE-GLU-GLU-ILE-PRO-GLU-GLU-TYR-LEU-GLN-OH;GLY-ASP-PHE-GLU-GLU-ILE-PRO-GLU-GLU-TYR-LEU-GLN;Hirudin;

### Product Information

**Species** Poecilobdella manillensis

**Appearance** Fine powder

**CAS No.** 113274-56-9

**Activity** 300ATU/g-1200ATU/g

**Function** Anticoagulant Effect: Hirudin inhibits thrombin with high specificity and efficiency, blocking its proteolytic function, thereby exhibiting anticoagulant properties. Compared to heparin, hirudin requires a smaller dosage, does not cause bleeding, and is not dependent on endogenous cofactors. Antithrombotic Effect: Hirudin improves microcirculation and promotes metabolism. It helps in the absorption of hematomas in acute cerebral hemorrhage, reduces inflammation and edema, alleviates increased intracranial pressure, and promotes the recovery of neurological function. It also promotes the absorption of experimental hematomas in the ear. Improvement of Cholesterol and Triglycerides: Hirudin significantly reduces cholesterol and triglyceride levels in experimental hyperlipidemia. It also has an inhibitory effect on tumor cells, particularly showing a certain inhibitory effect on liver cancer, enhancing the action of anticancer drugs and immune cells to help kill cancer cells. Anti-Myocardial Ischemia and Arrhythmia: Hirudin's aqueous extract has a significant relieving effect on acute myocardial ischemia and arrhythmia. It increases blood flow, improves local circulation, and also has a certain inhibitory effect on atrial fibrillation and peripheral inflammation. Improvement of Diabetes and Its Complications: Hirudin acts as an insulin sensitizer, enhancing the body's sensitivity to its own insulin, thus helping to lower blood sugar levels. It also reduces vascular wall inflammation, prevents thrombosis, and decreases the risk of diabetic complications such as eye disease, kidney damage, and lower limb necrosis.

### Usage and Packaging

**Package** 1kg aluminum foil vacuum bag

### Storage and Shipping Information

**Storage** Store in a cool, ventilated and dry place, avoid direct sunlight.