For Research Use Only

Recombinant Human RNASE1 protein (rFc Tag) (HPLC verified)

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Catalog Number: Eg3044

Basic Information

Species:
Human

Purity:
>90 %, SDS-PAGE
 >90 %, SEC-HPLC

Tag:
rFc Tag

Technical Specifications

Purity:
>90 %, SDS-PAGE
 >90 %, SEC-HPLC

Endotoxin Level:
<0.1 EU/μg protein, LAL method

Source:
HEK293-derived Human RNASE1 protein Lys29-Thr156 (Accession# P07998) with a rabbit IgG Fc tag at the C-terminus.

GeneID:
6035

Accession:
P07998

Predicted Molecular Mass:
40.6 kDa

SDS-PAGE:
42-55 kDa, reducing (R) conditions

Formulation:
Lyophilized from 0.22 μm filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

Biological Activity

Not tested

Storage and Shipping

Storage:
It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20°C to -80°C as lyophilized proteins.
- 3 months, -20°C to -80°C under sterile conditions after reconstitution.

Shipping:
The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

Background

Ribonucleases (RNases) are enzymes that catalyze the degradation of RNA into smaller components. They play crucial roles in various biological processes, including RNA maturation, immune defense, and cellular stress responses. In humans, several types of RNases have been identified and characterized. The ribonuclease A (RNase A) family is one of the best-characterized vertebrate-specific proteins, and in humans, eight catalytically active RNases (numbered 1–8) have been identified and have unique tissue distributions. Apart from the digestion of dietary RNA, these RNases have a broad range of biological actions, including the regulation of intra- or extra-cellular RNA metabolism, antiviral, antibacterial, and antifungal activities, neurotoxicity, promotion of cell proliferation, anti-apoptosis, and immunomodulatory abilities. Based on multiple biological roles, RNases are found to participate in the pathogenic processes of many diseases, such as infection, immune dysfunction, neurodegeneration, cancer, and cardiovascular disorders.

References

1. Rosenberg HF. (2008) J Leukoc Biol. 83(5):1079-87.
2. Michlewski G, (2010) RNase-assisted RNA chromatography. 16(8):1673-8.
3. Bao L, Hu J, et al. (2023) Nat Commun. 14(1):2280.
4. Rudler DL, Siira SJ, et al. (2023) Methods Mol Biol. 2661:317-328.

Synonyms

EC:4.6.1.18, HP RNase, HPRNase, HP-RNase, RIB 1

For technical support and original validation data for this product please contact

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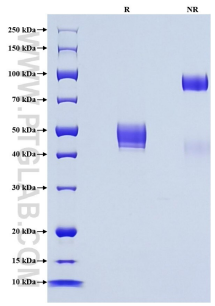
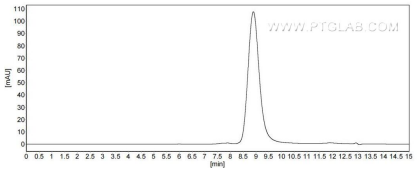
Selected Validation Data



Purity of Recombinant Human RNASE1 was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.



The purity of Human RNASE1 was greater than 90% as determined by SEC-HPLC.