Recombinant Human HYAL1 Protein(His Tag)

Catalog Number: PDMH100438

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

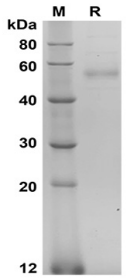
Description

Species	Human
Source	Mammalian-derived Human HYAL1 protein Met1-Trp435, with an C-terminal His
Mol_Mass	47.7 kDa
Accession	Q12794
Bio-activity	Not validated for activity

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis

Data



SDS-PAGE analysis of Human HYAL1 proteins, 2μg/lane of Recombinant Human HYAL1 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 50-60 kDa

Background

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Human hyaluronidases (HYALs) are a group of five endo- beta -N-acetyl-hexosaminidases that include HYAL1, HYAL2, HYAL3, HYAL4, and SPAM1 (PH20). While HYAL1, HYAL2 and SPAM1 are endo- beta -N-acetyl-glucosaminidase that are mainly active on hyaluronan with little activity on chondroitin sulfate, HYAL4 is mainly active on chondroitin sulfate (type C and D in particular) (6). Hyaluronan and chondroitin sulfate are abundant extracellular matrix components that have numerous biological functions. The backbone of chondroitin sulfate composed of repeating units of -4GlcA beta 1-3GalNAc beta 1- most closely resembles to that of hyaluronan composed of repeating units of -4GlcA beta 1-3GlcNAc beta 1-, which may partially explain the overlapping substrate specificity of most hyaluronidases. HYAL1 is a lysosomal hyaluronidase with optimal activity around pH 4.0. It is highly expressed in the liver, kidney and heart, and is the predominant hyaluronidase found in plasma. Defects in HYAL1 are associated with mucopolysaccharidosis type IX, or hyaluronidase deficiency. Surprisingly, HYAL1 has been reported both as a tumor promoter and suppressor. The enzymatic activity of recombinant human HYAL1 was measured using 35S-labeled hyaluronan as substrate.

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