

Synonym

SPAM1,PH-20,HYAL3,HYA1,HYAL1,HYAL5,SPAG15

Source

Human PH20, His Tag(PH0-H5225) is expressed from human 293 cells (HEK293). It contains AA Leu 36 - Tyr 482 (Accession # [P38567-1](#) ).  
Predicted N-terminus: Leu 36

Molecular Characterization

PH20(Leu 36 - Tyr 482)  
P38567-1

Poly-his

This protein carries a polyhistidine tag at the C-terminus.  
The protein has a calculated MW of 53.0 kDa. The protein migrates as 60-66 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

Storage

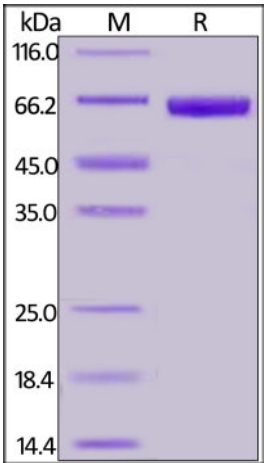
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- 20°C to -70°C for 12 months in lyophilized state;
- 70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



Human PH20, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity

The activity of Human PH20, His Tag (Cat. No. PH0-H5225) is measured by its ability to hydrolyze HA in turbidimetric assay (45 minute assay). The specific activity is >60,000 U/mg. (Unit Definition: One unit of Hyaluronidase activity will cause a change in A600 of 0.330 per minute at pH5.35 at 37 °C in a 2.0 mL reaction mixture) (QC tested).

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## Background

Hyaluronidase PH-20 is also known as Sperm adhesion molecule 1 (SPAM1) and Sperm surface protein PH-20, which belongs to the glycosyl hydrolase 56 family, SPAM1 / PH-20 is expressed in testis. SPAM-1 / PH20 random hydrolysis of (1->4)-linkages between N – acetyl – beta – D – glucosamine and D-glucuronate residues in hyaluronate. SPAM-1 / PH20 involved in sperm-egg adhesion. Upon fertilization sperm must first penetrate a layer of cumulus cells that surrounds the egg before reaching the zona pellucida. The cumulus cells are embedded in a matrix containing hyaluronic acid which is formed prior to ovulation. SPAM1 aids in penetrating the layer of cumulus cells by digesting hyaluronic acid.

## Clinical and Translational Updates

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