

## Hyaluronidase PH-20 Recombinant Protein | SPAM1 recombinant protein

Recombinant Human Hyaluronidase PH-20

|                               |                                                                 |
|-------------------------------|-----------------------------------------------------------------|
| CATALOG #<br><b>AAA113920</b> | HOST<br><b>E Coli or Yeast or Baculovirus or Mammalian Cell</b> |
|-------------------------------|-----------------------------------------------------------------|

### PRODUCT SYNONYMS

Hyaluronidase PH-20; Recombinant Human Hyaluronidase PH-20; Hyaluronoglucosaminidase PH-20; Sperm adhesion molecule 1; Sperm surface protein PH-20; SPAM1 recombinant protein

### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| Host                    | E Coli or Yeast or Baculovirus or Mammalian Cell                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Purity/Purification     | Greater or equal to 85% purity as determined by SDS-PAGE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Form/Format             | Lyophilized or liquid (Format to be determined during the manufacturing process)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Sequence Positions      | 36-490aa; Full Length of Mature Protein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Sequence                | LNFRAPPVIP NVPFLWAWNA PSEFC LGKFD EPLDMSLFSF IGSPRINATG QGVTFYVDR LGYYPIYDSI<br>TGVTVNGGIP QKISLQDHL D KAKKDITFYM PVDNLGMAVI DWEEWRPTWA RNWKPKDVYK NRSIELVQQQ<br>NVQLSLTEAT EKAKQEF EKA GKDFLVETIK LGKLLRP NHL WGYLFPDCY NHHYKKPGYN GSCFNVEIKR<br>NDDL SWLWNE STALYPSIYL NTQQSPVAAT LYVRNRVREA IRVSKIPDAK SPLPVFAYTR IVFTDQVLKF<br>LSQDELVYTF GETVALGASG IWIWGTLSIM RSMKSCLLD NYMETILNPY IINVTLA AKM CSQVLCQE QG<br>VCIRKNWNSS DYHLNPDNF AIQLEKGGKF TVRGKPTLED LEQFSEKFYC SCYSTLSCKE KADVKD TDAV<br>DVC IADGVCI DAFLKPPMET EEPQIFYNAS PSTLS                                                                                                                                                                                                                                              |
| Production Note         | <b>Special Offer:</b> The E Coli host-expressed protein is manufactured from a stock plasmid containing the protein gene. E Coli host-expressed protein is stocked in different unit sizes ranging from as small as 10 ug to as large as 1 mg. Bulk inventory is also available. The E Coli host-expressed protein has been ordered over and over again by researchers and has stood the test of time as both a robust protein and important target for the research community. It is part of our new program to make our most popular protein targets and corresponding hosts available in expanded unit sizes and with a quick processing time. Select E Coli host-expressed protein for the fastest delivery among all hosts. Please contact our <b>or email to</b> for more details. |
| Preparation and Storage | Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

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| Related Product Information for SPAM1 recombinant protein | 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 bedded in a matrix containing hyaluronic acid which is formed prior to ovulation. This protein aids in penetrating the layer of cumulus cells by digesting hyaluronic acid.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Product Categories/Family for SPAM1 recombinant protein   | Cancer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| References                                                | Molecular cloning of the human and monkey sperm surface protein PH-20.Lin Y., Kimmel L.H., Myles D.G., Primakoff P.Proc. Natl. Acad. Sci. U.S.A. 90:10071-10075(1993) The human sperm protein PH-20 has hyaluronidase activity.Gmachl M., Sagan S., Ketter S., Kreil G.FEBS Lett. 336:545-548(1993) Expression analysis, genomic structure, and mapping to 7q31 of the human sperm adhesion molecule gene SPAM1.Jones M.H., Davey P.M., Aplin H., Affara N.A.Genomics 29:796-800(1995) The DNA sequence of human chromosome 7.Hillier L.W., Fulton R.S., Fulton L.A., Graves T.A., Pepin K.H., Wagner-McPherson C., Layman D., Maas J., Jaeger S., Walker R., Wylie K., Sekhon M., Becker M.C., O'Laughlin M.D., Schaller M.E., Fewell G.A., Delehaunty K.D., Miner T.L., Nash W.E., Cordes M., Du H., Sun H., Edwards J., Bradshaw-Cordum H., Ali J., Andrews S., Isak A., Vanbrunt A., Nguyen C., Du F., Lamar B., Courtney L., Kalicki J., Ozersky P., Bielicki L., Scott K., Holmes A., Harkins R., Harris A., Strong C.M., Hou S., Tomlinson C., Dauphin-Kohlberg S., Kozlowski-Reilly A., Leonard S., Rohlfing T., Rock S.M., Tin-Wollam A.-M., Abbott A., Minx P., Maupin R., Strowmatt C., Latreille P., Miller N., Johnson D., Murray J., Woessner J.P., Wendl M.C., Yang S.-P., Schultz B.R., Wallis J.W., Spieth J., Bieri T.A., Nelson J.O., Berkowicz N., Wohldmann P.E., Cook L.L., Hickenbotham M.T., Eldred J., Williams D., Bedell J.A., Mardis E.R., Clifton S.W., Chisoe S.L., Marra M.A., Raymond C., Haugen E., Gillett W., Zhou Y., James R., Phelps K., Iadanoto S., Bubbs K., Simms E., Levy R., Clendenning J., Kaul R., Kent W.J., Furey T.S., Baertsch R.A., Brent M.R., Keibler E., Flicek P., Bork P., Suyama M., Bailey J.A., Portnoy M.E., Torrents D., Chinwalla A.T., Gish W.R., Eddy S.R., McPherson J.D., Olson M.V., Eichler E.E., Green E.D., Waterston R.H., Wilson R.K.Nature 424:157-164(2003) Human chromosome 7 DNA sequence and biology.Scherer S.W., Cheung J., MacDonald J.R., Osborne L.R., Nakabayashi K., Herbrick J.-A., Carson A.R., Parker-Katiraei L., Skaug J., Khaja R., Zhang J., Hudek A.K., Li M., Haddad M., Duggan G.E., Fernandez B.A., Kanematsu E., Gentles S., Christopoulos C.C., Choufani S., Kwasnicka D., Zheng X.H., Lai Z., Nusskern D.R., Zhang Q., Gu Z., Lu F., Zeesman S., Nowaczyk M.J., Teshima I., Chitayat D., Shuman C., Weksberg R., Zackai E.H., Grebe T.A., Cox S.R., Kirkpatrick S.J., Rahman N., Friedman J.M., Heng H.H.Q., Pelicci P.G., Lo-Coco F., Belloni E., Shaffer L.G., Pober B., Morton C.C., Gusella J.F., Bruns G.A.P., Korf B.R., Quade B.J., Ligon A.H., Ferguson H., Higgins A.W., Leach N.T., Herrick S.R., Lemyre E., Farra C.G., Kim H.-G., Summers A.M., Gripp K.W., Roberts W., Szatmari P., Winsor E.J.T., Grzeschik K.-H., Teebi A., Minassian B.A., Kere J., Armengol L., Pujana M.A., Estivill X., Wilson M.D., Koop B.F., Tosi S., Moore G.E., Boright A.P., Zlotorynski E., Kerem B., Kroisel P.M., Petek E., Oscier D.G., Mould S.J., Doehner H., Doehner K., Rommens J.M., Vincent J.B., Venter J.C., Li P.W., Mural R.J., Adams M.D., Tsui L.-C.Science 300:767-772(2003) Mural R.J., Istrail S., Sutton G., Florea L., Halpern A.L., Mobarry C.M., Lippert R., Walenz B., Shatkay H., Dew I., Miller J.R., Flanigan M.J., Edwards N.J., Bolanos R., Fasulo D., Halldorsson B.V., Hannenhalli S., Turner R., Yooseph S., Lu F., Nusskern D.R., Shue B.C., Zheng X.H., Zhong F., Delcher A.L., Huson D.H., Kravitz S.A., Mouchard L., Reinert K., Remington K.A., Clark A.G., Waterman M.S., Eichler E.E., Adams M.D., Hunkapiller M.W., Myers E.W., Venter J.C. In vitro mutagenesis of PH-20 hyaluronidase from human sperm.Arming S., Strobl B., Wechselberger C., Kreil G.Eur. J. Biochem. 247:810-814(1997) Exome sequencing identifies frequent mutation of the SWI/SNF complex gene PBRM1 in renal carcinoma.Varela I., Tarpey P., Raine K., Huang D., Ong C.K., Stephens P., Davies H., Jones D., Lin M.L., Teague J., Bignell G., Butler A., Cho J., Dalglish G.L., Galappaththige D., Greenman C., Hardy C., Jia M., Latimer C., Lau K.W., Marshall J., McLaren S., Menzies A., Mudie L., Stebbings L., Largaespada D.A., Wessels L.F.A., Richard S., Kahnoski R.J., Anema J., Tuveson D.A., Perez-Mancera P.A., Mustonen V., Fischer A., Adams D.J., Rust A., Chan-On W., Subimerb C., Dykema K., Furge K., Campbell P.J., Teh B.T., Stratton M.R., Futreal P.A.Nature 469:539-542(2011) |

NCBI AND UNIPROT INFORMATION

|                           |                |
|---------------------------|----------------|
| NCBI GI #                 | 291290979      |
| NCBI GeneID               | 6677           |
| NCBI Accession #          | NP_001167515.1 |
| NCBI GenBank Nucleotide # | NM_001174044.1 |
| UniProt Accession #       | P38567; Q8TC30 |
| Molecular Weight          | 67.9 kDa       |

|                                  |                                                                         |
|----------------------------------|-------------------------------------------------------------------------|
| NCBI Official Full Name          | hyaluronidase PH-20 isoform 2                                           |
| NCBI Official Synonym Full Names | sperm adhesion molecule 1 (PH-20 hyaluronidase, zona pellucida binding) |
| NCBI Official Symbol             | SPAM1                                                                   |
| NCBI Official Synonym Symbols    | HYA1; PH20; HYAL1; HYAL3; HYAL5; PH-20; SPAG15; HEL-S-96n               |
| NCBI Protein Information         | hyaluronidase PH-20                                                     |
| UniProt Protein Name             | Hyaluronidase PH-20                                                     |
| UniProt Gene Name                | <b>SPAM1</b>                                                            |
| UniProt Synonym Gene Names       | HYAL3; PH20; Hyal-PH20                                                  |
| UniProt Entry Name               | HYALP_HUMAN                                                             |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/spam1-recombinant-protein-e-coli/113920>