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Datasheet for ABIN3092974

HRG Protein (AA 19-525) (His tag)

1 Image

Overview

Quantity:	1 mg
Target:	HRG
Protein Characteristics:	AA 19-525
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This HRG protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence: VSPTDCSAVE PEA EKALDLI NKRRRDGYLF QLLRIAD AHL DRVENTTVYY LVLDVQESDC
SVLSRKYWND CEPPDSRRPS EIVIGQCKVI ATRHSHESQD LRVIDFNCTT SSVSSALANT
KDSPVLIDFF EDTERYRKQA NKALEKYKEE NDDFASFRVD RIERVARVRG GEGTGYFVDF
SVRNCPRHHF PRHPNVFGFC RADLFYDVEA LDLESPKNLV INCEVFDPQE HENINGVPPH
LGHPFHWGGH ERSSTTKPPF KPHGSRDHHH PHKPHEHGPP PPPDERDHS HGPPLPQGPPP
LLPMSCSSCQ HATFGTNGAQ RSHSHNNSSD LHPHKHHSHE QHPHGHHPHA HHPHEHDTHR
QHPHGHHPHG HHPHGHHPHG HHPHGHHPHC HDFQDYGPCD PPPHNQGHCC HGHGPPPGHL
RRRGP GK GPR PFHCRQIGSV YRLPPLRKGE VLPLPEANFP SFPLPHHKHP LKPDNQFPFQ
SVSESCPGKF KSGFPQVSMF FTHTFPK

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Product Details

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human HRG Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility:

0.22 µm filtered

Endotoxin Level:

Protein is endotoxin free.

Grade:

Crystallography grade

Target Details

Target: HRG

Alternative Name: HRG ([HRG Products](#))

Background: Plasma glycoprotein that binds a number of ligands such as heme, heparin, heparan sulfate, thrombospondin, plasminogen, and divalent metal ions. Binds heparin and heparin/glycosaminoglycans in a zinc-dependent manner. Binds heparan sulfate on the surface of liver, lung, kidney and heart endothelial cells. Binds to N-sulfated polysaccharide chains on the surface of liver endothelial cells. Inhibits rosette formation. Acts as an adapter protein and is implicated in regulating many processes such as immune complex and pathogen clearance, cell chemotaxis, cell adhesion, angiogenesis, coagulation and fibrinolysis. Mediates clearance of necrotic cells through enhancing the phagocytosis of necrotic cells in a heparan sulfate-dependent pathway. This process can be regulated by the presence of certain HRG ligands such as heparin and zinc ions. Binds to IgG subclasses of immunoglobins containing kappa and lambda light chains with different affinities regulating their clearance and inhibiting the formation of insoluble immune complexes. Tethers plasminogen to the cell surface. Binds T-cells and alters the cell morphology. Modulates angiogenesis by blocking the CD6-mediated antiangiogenic effect of thrombospondins, THBS1 and THBS2. Acts as a regulator of the vascular endothelial growth factor (VEGF) signaling pathway, inhibits endothelial cell motility by reducing VEGF-induced complex formation between PXN/paxillin and ILK/integrin-linked protein kinase and by promoting inhibition of VEGF-induced tyrosine phosphorylation of focal adhesion kinases and alpha-actinins in endothelial cells. Also plays a role in the regulation of tumor angiogenesis and tumor immune surveillance. Normalizes tumor vessels and promotes antitumor immunity by polarizing tumor-associated macrophages, leading to decreased tumor growth and metastasis. {ECO:0000269|PubMed:11134179, ECO:0000269|PubMed:12235005, ECO:0000269|PubMed:14744774, ECO:0000269|PubMed:15220341, ECO:0000269|PubMed:15313924, ECO:0000269|PubMed:16436387, ECO:0000269|PubMed:16489009, ECO:0000269|PubMed:19285951, ECO:0000269|PubMed:19535045, ECO:0000269|PubMed:19712047, ECO:0000269|PubMed:19903770, ECO:0000269|PubMed:20573803, ECO:0000269|PubMed:21215706, ECO:0000269|PubMed:21304106}.

Molecular Weight: 58.6 kDa Including tag.

UniProt: [P04196](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies

Application Details

as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process