

Datasheet for ABIN7554116  
**HMHA1 Protein (AA 1-1136) (His tag)**



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## Overview

Quantity:	1 mg
Target:	HMHA1
Protein Characteristics:	AA 1-1136
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This HMHA1 protein is labelled with His tag.

## Product Details

Purpose:	Custom-made recombinant ARHGAP45 Protein expressed in mammalian cells.
Sequence:	MFSRKKRELM KTPSISKKNR AGSPSPQPSG ELPRKDGADA VFPGPSLEPP AGSSGVKATG TLKRPTSLSR HASAAGFPLS GAASWTLGRS HRSPLTAASP GELPTEGAGP DWVEDISHLL ADVARFAEGL EKLKECVLRD DLLEARRPRA HECLGEALRV MHQIISKYPL LNTVETLTAA GTLIAKVKAF HYESNNDLEK QEFEKALETI AVAFSSTVSE FLMGEVDSST LLAVPPGDSS QSMESLYGPG SEGTPPSLED CDAGCLPAEE VDVLLQRCEG GVDAALLYAK NMAKYMKDLI SYLEKRTTLE MEFAKGLQKI AHNCRQSVMQ EPHMPLLSIY SLALEQDLEF GHSMVQAVGT LQTQTFMQPL TLRRLEHEKR RKEIKEAWHR AQRKLQEAES NLRKAKQGYV QRCEDHDKAR FLVAKAEEEEQ AGSAPGAGST ATKTLDKRRR LEEEAKNKAE EAMATYRTCV ADAKTQKQEL EDTKVTALRQ IQEVIRQSDQ TIKSATISYY QMMHMQTAPL PVHFQMLCES SKLYDPGQQY ASHVRQLQRD QEPDVHYDFE PHVSANAWSP VMARKSSFN VSDVARPEAA GSPPEEGGCT EGTPAKDHRA GRGHQVHKSW PLSISDSDSG LDPGPGAGDF KKFERTSSSG TMSSTEELVD PDGGAGASAF EQADLNGMTP ELPVAVPSGP FRHEGLSKAA RTHRLRKLRT PAKCRECNSY

## Product Details

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VYFQGAEECE CCLACHKKCL ETLAIQCGHK KLGRLQLFG QDFSHAARSA PDGVPFIVKK  
CVCEIERRAL RTKGIYRVNG VKTRVEKLCQ AFENGKELVE LSQASPHDIS NVLKLYLRQL  
PEPLISFRLY HELVGLAKDS LKAEAEAKAA SRGRQDGSES EAVAVALAGR LRELLRDLPP  
ENRASLQYLL RHLRRIVEVE QDNKMTPGNL GIVFGPTLLR PRPTEATVSL SSLVDYPHQA  
RVIETLIVHY GLVFEETPEE TPGGQDESSN QRAEWWWQVP YLEAGEAVVY PLQEAAAADGC  
RESRVVSNDS DSDLEEASEL LSSSEASALG HLSFLEQQQS EASLEVASGS HSGSEEQLEA  
TAREGDGDE DGPAQQLSGF NTNQSNVNLQ APLPPMRLRG GRMTLGSCRE RQPEFV **Sequence  
without tag. The proposed Purification-Tag is based on experiences with the expression  
system, a different complexity of the protein could make another tag necessary. In case you  
have a special request, please contact us.**

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Specificity: If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.

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Characteristics: Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- 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 try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

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.

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Purity: > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)

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Grade: custom-made

## Target Details

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Target: HMHA1

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Alternative Name: ARHGAP45 ([HMHA1 Products](#))

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Background: Rho GTPase-activating protein 45 [Cleaved into: Minor histocompatibility antigen HA-1 (mHag

## Target Details

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HA-1)],FUNCTION: Contains a GTPase activator for the Rho-type GTPases (RhoGAP) domain that would be able to negatively regulate the actin cytoskeleton as well as cell spreading. However, also contains N-terminally a BAR-domain which is able to play an autoinhibitory effect on this RhoGAP activity. {ECO:0000269|PubMed:24086303}., FUNCTION: Precursor of the histocompatibility antigen HA-1. More generally, minor histocompatibility antigens (mHags) refer to immunogenic peptide which, when complexed with MHC, can generate an immune response after recognition by specific T-cells. The peptides are derived from polymorphic intracellular proteins, which are cleaved by normal pathways of antigen processing. The binding of these peptides to MHC class I or class II molecules and its expression on the cell surface can stimulate T-cell responses and thereby trigger graft rejection or graft-versus-host disease (GVHD) after hematopoietic stem cell transplantation from HLA-identical sibling donor. GVHD is a frequent complication after bone marrow transplantation (BMT), due to mismatch of minor histocompatibility antigen in HLA-matched sibling marrow transplants. Specifically, mismatching for mHag HA-1 which is recognized as immunodominant, is shown to be associated with the development of severe GVHD after HLA-identical BMT. HA-1 is presented to the cell surface by MHC class I HLA-A\*0201, but also by other HLA-A alleles. This complex specifically elicits donor-cytotoxic T-lymphocyte (CTL) reactivity against hematologic malignancies after treatment by HLA-identical allogeneic BMT. It induces cell recognition and lysis by CTL. {ECO:0000269|PubMed:12601144, ECO:0000269|PubMed:8260714, ECO:0000269|PubMed:8532022, ECO:0000269|PubMed:9798702}.

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Molecular Weight: 124.6 kDa

UniProt: [Q92619](#)

## Application Details

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Application Notes: We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Restrictions: For Research Use only

## Handling

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Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

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## Handling

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Storage Comment: Store at -80°C.

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Expiry Date: 12 months