

Datasheet for ABIN3096389

## WAS Protein Family Homolog 1 (WASH1) (AA 1-465) protein (His tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	WAS Protein Family Homolog 1 (WASH1)
Protein Characteristics:	AA 1-465
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	His tag
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB), Crystallization (Crys)

#### Product Details

Sequence: MTPVRMQHSL AGQTYAVPFI QPDLRREEAV QQMADALQYL QKVSGDIFSR ISQQVEQSRS  
 QVQAIGEKVS LAQAKIEKIK GSKKAIKVFS SAKYPAPGRL QEYGSIFTGA QDPGLQRRPR  
 HRIQSKHRPL DERALQEKLK DFPVCVSTKP EPEDDAEEGL GGLPSNISSV SLLLLFNTTE  
 NLYKKYVFLD PLAGAVTKTH VMLGAETEEK LFDAPLSISK REQLEQQVPE NYFYVPDLGQ  
 VPEIHVPSYL PDLPGIANDL MYSADLGPGI APSAPGTIPE LPTFHTEVAE PLKVDLQDGV  
 LTPPPPPPPP PPAPEVLASA PPLPPSTAAP VGQGARQDDS SSSASPSVQG APREVVDPSPG  
 GWATLLESIR QAGGIGKAKL RSMKEREKLEK QQQKEQEQVR ATSQQGHLMS DLFNKLVMRR  
 KGISGKGPGA GEGPGGAFVR VSDSIPPLPP PQQPQAEDE DDWES

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

- Characteristics:
- Made in Germany - from design to production - by highly experienced protein experts.
  - Human WASH1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process

## Product Details

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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.

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Purification:	Two step purification of proteins expressed in baculovirus infected SF9 insect cells: <ol style="list-style-type: none"><li>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.</li><li>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.</li></ol>
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

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Target: WAS Protein Family Homolog 1 (WASH1)

Alternative Name: WASH1 ([WASH1 Products](#))

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## Target Details

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**Background:** Acts as a nucleation-promoting factor (NPF) at the surface of endosomes, where it recruits and activates the Arp2/3 complex to induce actin polymerization, playing a key role in the fission of tubules that serve as transport intermediates during endosome sorting (PubMed:19922874, PubMed:19922875, PubMed:20498093, PubMed:23452853). Its assembly in the WASH core complex seems to inhibit its NPF activity and via FAM21 is required for its membrane targeting (PubMed:20498093). Involved in endocytic trafficking of EGF (By similarity). Involved in transferrin receptor recycling. Regulates the trafficking of endosomal alpha5beta1 integrin to the plasma membrane and involved in invasive cell migration (PubMed:22114305). In T-cells involved in endosome-to-membrane recycling of receptors including T-cell receptor (TCR), CD28 and ITGAL, proposed to be implicated in T cell proliferation and effector function. In dendritic cells involved in endosome-to-membrane recycling of major histocompatibility complex (MHC) class II probably involving retromer and subsequently allowing antigen sampling, loading and presentation during T-cell activation (By similarity). Involved in Arp2/3 complex-dependent actin assembly driving Salmonella typhimurium invasion independent of ruffling. Involved in the exocytosis of MMP14 leading to matrix remodeling during invasive migration and implicating late endosome-to-plasma membrane tubular connections and cooperation with the exocyst complex (PubMed:24344185). Involved in negative regulation of autophagy independently from its role in endosomal sorting by inhibiting BECN1 ubiquitination to inactivate PIK3C3/Vps34 activity (By similarity). {ECO:0000250|UniProtKB:C4AMC7, ECO:0000250|UniProtKB:Q8VDD8, ECO:0000269|PubMed:19922874, ECO:0000269|PubMed:19922875, ECO:0000269|PubMed:20498093, ECO:0000269|PubMed:22114305, ECO:0000269|PubMed:23452853, ECO:0000305|PubMed:20498093}.

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**Molecular Weight:** 51.3 kDa Including tag.

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**UniProt:** [A8K0Z3](#)

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**Pathways:** [Regulation of Actin Filament Polymerization](#)

## Application Details

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**Application Notes:** In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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**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

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## Application Details

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receive your protein of interest.

Restrictions: For Research Use only

## Handling

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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

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