



**LD Biopharma, Inc.**  
7384 Trade Street, Suite B  
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<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human WASF3 Protein  
**Catalog Number:** hRP-1992  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human Wiskott-Aldrich Syndrome Protein Family member 3 (WASF3) gene encodes a member of the Wiskott-Aldrich syndrome protein family. As WASF3 forms a multi-protein complex that links receptor kinases and actin, its binding to actin occurs through a C-terminal verprolin homology domain in all family members. The multi-protein complex serves to transduce signals that involve changes in cell shape, motility or function. Recent data indicated that activation of the WASF3 protein by extracellular stimuli promotes actin cytoskeleton reorganization and facilitates cancer cell invasion, whereas WASF3 depletion suppresses invasion and metastasis.

Full-length mature form of human WASF3 cDNA (501aa) was constructed with codon optimization gene synthesis technology and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. It was expressed in *E. coli* as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

**Gene Symbol:** WASF3 (Brush-1; SCAR3; WAVE3)  
**Accession Number:** NP\_006637  
**Species:** Human  
**Size:** 20 µg / Vial  
**Composition:** 0.2 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

### Key References

Teng Y, et al., *Targeting the WASF3-CYFIP1 complex using stapled peptides suppresses cancer cell invasion*. *Cancer Res.* Feb 15; 76(4): 965-973 (2016)



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Teng Y, et al., *Mitochondrial ATAD3A combines with GRP78 to regulate the WASF3 metastasis-promoting protein.* *Oncogene* 35 (3),333-343 (2016)

Ji Y, et al., *Overexpression of WAVE3 promotes tumor invasiveness and confers an unfavorable prognosis in human hepatocellular carcinoma* *Biomed. Pharmacother.* 69, 409-415 (2015)

Yue Z, et al., *WAVE3 promotes epithelial-mesenchymal transition of gastric cancer through upregulation of Snail.* *Cancer Gene Ther.* 21 (12), 499-506 (2014)

## **Applications**

1. May be used for in vitro WASF3 mediated multi-protein complex signaling kinase/ actin pathway regulation study for cancer cells by intracellular delivery of this protein with protein delivery reagent such as ProFectin reagent kit.
2. May be used for mapping protein-protein interaction.
3. Potential therapeutic protein for tumor treatment.
4. As immunogen for specific antibody production.

## **Quality Control**

Purity: > 90% by SDS-PAGE.

## **Recombinant Protein Sequence**

MASMTGGQQMGRGHHHHHHENLYFQGGFEGSPLVKRNIEPRHLRCGALPEGITSELECVTNSTL  
AAIIRQLSSLKHAEDIFGELFNEANNFYIRANSLQDRIDRLAVKVTQLDSTVEEVSLQDINMK  
KAFKSSTVQDQQVSKNSIPNPVADIYNQSDKPPPLNILTPYRDDKDKGLKFYTDPSYFFDLWK  
EKMLQDTEDKRKEKRRQKREKHKLNPNRNQQVNVKVRTRKEEWERRKMGIEFMSDAKKLEQAG  
SAKEDRVPSGSHASDVTDYSYPATPNHSLHPQPVTPSYAAGDVPPHGPASQAAEHEYRPPSASA  
RHMALNRPQQPPPPPPQAPEGSQASAPMAPADYGMLPAQIIIEYYNPSGPPPPPPPPVIPSQAQT  
AFVSPLQMPMQPPFPASASSTHAAPPHPPSTGLLVTAAPPPGPPPPPPGPPGPGSSLS SSPMHG  
PPVAEAKRQEPAQPPISDARSDLLAAIRMGIQLKKVQEQRQEAKREPVGNDVATILSRRIAVE  
YSDSDDDSEFDENDWSD