



**LD Biopharma, Inc.**  
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<http://www.ldbiopharma.com>

## **- PRODUCT DATA SHEET -**

**Name of Product:** Recombinant Human SHARPIN Protein  
**Catalog Number:** HRP-2600  
**Manufacturer:** LD Biopharma, Inc.

### **Introduction:**

Human SHARPIN gene encodes a protein, which is a component of the LUBAC complex that conjugates linear polyubiquitin chains in a head-to-tail manner to substrates and plays a key role in NF-kappa-B activation and regulation of inflammation. LUBAC conjugates linear polyubiquitin to IKBKG and RIPK1 and is involved in activation of the canonical NF-kappa-B and the JNK signaling pathways. Linear ubiquitination mediated by the LUBAC complex interferes with TNF-induced cell death and thereby prevents inflammation. LUBAC is proposed to be recruited to the TNF-R1 signaling complex ( TNF-RSC ) following polyubiquitination of TNF-RSC components by BIRC2 and/or BIRC3 and to conjugate linear polyubiquitin to IKBKG and possibly other components contributing to the stability of the complex. Together with FAM105B/otulin, the LUBAC complex regulates the canonical Wnt signaling during angiogenesis.

Full-length human SHARPIN (325aa, Isoform-II, derived from BC025244) gene was constructed with codon optimization gene synthesis as 29 aa N-terminal T7\_His\_TEV cleavage site Tag and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

<b>Gene Symbol:</b>	SHARPIN ( SIPL1; PSEC0216 )
<b>Accession Number:</b>	Q9H0F6-2
<b>Species:</b>	Human
<b>Size:</b>	50 µg / Vial
<b>Composition:</b>	0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose, DTT & others.
<b>Storage:</b>	In liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.



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## Key References

Ojo D, et al., ***A role of SIPL1/SHARPIN in promoting resistance to hormone therapy in breast cancer.*** Biochim. Biophys. Acta 1864 (3), 735-745 (2018)

Bal E, et al., ***Lack of interaction between NEMO and SHARPIN impairs linear ubiquitination and NF-kappaB activation and leads to incontinentia pigmenti.*** J. Allergy Clin. Immunol. 140 (6), 1671-1682 (2017)

Liu J, et al., ***Structural Insights into SHARPIN-Mediated Activation of HOIP for the Linear Ubiquitin Chain Assembly.*** Cell Rep 21 (1), 27-36 (2017)

## Applications

- May be used for studying SHARPIN mediated ubiquitin signaling regulation in inflammation pathway, such as NFkb or Wnt by intracellular delivery of recombinant SHARPIN protein using reagent such as ProFectin.
- May be used for mapping SHARPIN protein-protein interaction.
- May be used as specific substrate protein for proteinase related enzyme functional screening assays.
- Highly purified human native SHARPIN antigen, excellent antigen for specific antibody development.

## Quality Control:

1. Purity: > 93% by SDS-PAGE.

## Recombinant Human SHARPIN Protein Sequence ( 37.0 kD )

**MASMTGGQQMGRGHHHHHENLYFQGGEF**APPAGGAAAAASDLGSAAVLLAVHAAVRPLGAGPD  
AEAQLRRLQLSADPERPGRFRLELLGAGPGAVNLEWPLESVSYTIRGPTQHELQPPPGPGTSL  
LHFLNPQEAQRWAVLVRGATVEGQNGSKSNSPPALGPEACPVSLPSPPEASTLKGPPEADLPR  
SPGNLTEREELAGSLARAIAGGDEKGAAQVAAVLAQHRVALSVQLQEACFPPIRLQVTLEDA  
ASAASAASSAHVALQVHPHCTVAALQEQVFSELGFPPAVQRWVIGRCLCVPERSLASYGVRQDG  
DPAFLYLLSAPREAPAQLVLSFLHLHQCPRPWL



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