



**LD Biopharma, Inc.**  
9924 Mesa Rim Road, Suite B  
San Diego, CA 92121  
Tel: 858-876-8266  
<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human FLOT2 Protein  
**Catalog Number:** hRP-1740  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Flotillin-2 (FLOT2, also named as ESA) is a highly conserved protein isolated from caveolae/lipid raft domains that tether growth factor receptors linked to signal transduction pathway. FLOT2 has recently been identified to be involved in tumorigenesis of several cancers such as breast cancer, melanoma, and gastric cancer. In skin tissue, FLOT2 expressed in epidermis and epidermal appendages but not in dermis. ESA<sup>+</sup> cells has been used to identify luminal cells (CD44<sup>lo</sup> / CD49f<sup>lo</sup> / CD24<sup>+</sup> / ESA<sup>+</sup>) in human gland tissue to separate three distinct epithelial cell types.

Full-length human FLOT2 cDNA (427 aa) gene was constructed using gene synthesis technology with codon optimization. A tag of 31 aa (T7/His/TEV cleavage site) was fused to LHPP N-terminal. This protein is 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:** FLOT2  
**Accession Number:** NP\_004466  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 0.5 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

Liu R, et al., *Identification of FLOT2 as a novel target for microRNA-34a in melanoma.* J. Cancer Res. Clin. Oncol. 141 (6), 993-1006 (2015)



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Liu C, et al., *Unconventional secretion of synuclein-gamma promotes tumor cell invasion*. FEBS J. 281 (22), 5159-5171 (2014)

Possidonio AC, et al., *Differences in the expression and distribution of flotillin-2 in chick, mice and human muscle cells*. PLoS ONE 9 (8), E103990 (2014)

Fork C, et al., *Flotillin-1 facilitates toll-like receptor 3 signaling in human endothelial cells*. Basic Res. Cardiol. 109 (6), 439 (2014)

Salzer U et al., *Stomatin, flotillin-1, and flotillin-2 are major integral proteins of erythrocyte lipid rafts*. Blood 97 (4), 1141-1143 (2001)

## **Applications**

1. May be used for in vitro FLOT2 protein caveolae/lipid raft pathway in cytokine regulation study in tumor cells with “ProFectin” reagent based intracellular delivery of this protein.
2. May be used for mapping FLOT2 protein-protein interaction.
3. May be used as specific substrate protein for kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. As immunogen for specific antibody production.

## **Quality Control**

Purity: > 90% by SDS-PAGE.

## **Recombinant Protein Sequence**

MASMTGGQQMGRGHHHHHENLYFQGGFNGNCHTVGPNEALVVSGGCCGSDYKQYVFGGWAWAW  
WCISDTQRISLEIMTLQPRCEDVETAEGVALTVTGVAQVKIMTEKELLAVACEQFLGKNVQDIK  
NVVLQTLLEGHLRSILGTLTVEQIYQDRDQFAKLVREVAAPDVGRMGIEILSFTIKDVYDKVDYL  
SSLGKTQTAVVQRDADIGVAEAERDAGIREAECKKEMLDVKFMADTKIADSKRAFELQKSAFSE  
EVNIKTAEAQLAYELQGAREQQKIRQEEIEIEVVQRKKQIAVEAQEILRTDKELIATVRRPAEA  
EAHRIQQIAEGEKVKQVLLAQAEAEKIRKIGEAETVIEAMGKAEERMKLKAEAYQKYGDAAK  
MALVLEALPQIAAKIAAPLPVPSGKIKNS