



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human SUGT1 Protein
Catalog Number: hRP-0307
Manufacturer: LD Biopharma, Inc.

Introduction

Human SUGT1 (Suppressor of G2 allele of SKP1 homolog isoform SGT1A) encodes a homologous protein to the yeast gene SGT1, which encodes a protein involved in kinetochore function and required for the G1/S and G2/M transitions. Complementation studies suggest that the human protein has similar functions. Recent data indicated that SUGT1 interacts with Hsp90 and Skp1 and target human Mis12 complexes to regulate the formation of kinetochore-microtubule binding site. SUGT1 amplification in colorectal cancer has also been linked to worsening prognosis.

Full length recombinant human SUGT1 protein was constructed with N-terminal 15aa (T7) tag. This protein was expressed in *E. coli* as inclusion bodies, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: SUGT1 (SGT1)
Accession Number: NP_006695
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

Gao G, et al., *SGT1 regulates Akt signaling by promoting beta-TrCP-dependent PHLPP1 degradation in gastric cancer cells*. Mol. Biol. Rep. 40 (4), 2947-2953 (2013)



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Hong TJ, et al., *Dynamic nucleotide-dependent interactions of cysteine- and histidine-rich domain (CHORD)-containing Hsp90 cochaperones Chp-1 and melusin with cochaperones PP5 and Sgt1*. J. Biol. Chem. 288 (1), 215-222 (2013)

Bhavsar AP, et al., *The Salmonella type III effector SspH2 specifically exploits the NLR co-chaperone activity of SGT1 to subvert immunity*. PLoS Pathog. 9 (7), E1003518 (2013)

Liu XS, et al., *Plk1 phosphorylates Sgt1 at the kinetochores to promote timely kinetochore-microtubule attachment*. Mol. Cell. Biol. 32 (19), 4053-4067 (2012)

Prus W, et al., *Nuclear translocation of Sgt1 depends on its phosphorylation state*. Int. J. Biochem. Cell Biol. 43 (12), 1747-1753 (2011)

Applications

1. May be used for invitro SUG1 mediated kinetochore function and required for G1/S and G2/M transitions regulation study for various cells by intracellular delivery of this protein with “ProFectin” reagent.
2. May be used for mapping SUGT1 protein-proteins interaction.
3. May be used as specific substrate protein for kinase and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. Potential biomarker protein for colorectal cancer diagnoses.
5. As immunogen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQENGRGEFAAAAAGTATSQRFFQSFS DALIDEDPQAAL EELTKALEQKPDDAQYYCQ
RAYCHILLGN YCVAVADAKKSLELNPNNSTAMLRK GICEYHEKNYAAALETFTTEGQKLD SADAN
FSVWIKRCQEAQNGSESEVWTHQSKIKYD WYQTESQVVITLMIKNVQKNDVNVEFSEKELSALV
KLPSGEDYNL KLELLHPIIPEQSTFKVLSTKIEIKLKKPEAVRWEKLEGGQGDVPTPKQFVADVK
NLYPSSSPYTRNWDKLVGEIKEEEKNEKLEGD AALNRLFQQIYSDGSDEVKRAMNKSFMESGGT
VLSTNWS DVGKRKVEINPPDDMEWKKY