



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human IL13RA2 Protein
Catalog Number: hRP-2088
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human interleukin-13 receptor subunit alpha-2 (IL13RA2) gene is closely related to IL13RA1, a subunit of the interleukin 13 receptor complex. This protein binds IL13 with high affinity, but lacks cytoplasmic domain, and does not appear to function as a signal mediator. It is reported to play a role in the internalization of IL13. Recent data indicated that IL13RA2 specific over-expression on human glioblastoma cell surface, which become an attractive therapeutic target for CAR-T based anti-tumor therapy.

Full-length extracellular domain of human IL13RA2 cDNA (27 – 343aa, derived from BC020739) was constructed with codon optimization gene synthesis and expressed with a human N-terminalT7-His-TEV cleavage site Tag (29aa) fusion. This protein 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: IL13RA2 (CD213A2; CT19; IL-13R; IL13BP)
Accession Number: NP_000631
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

Christine E. Brown, et al., *Regression of Glioblastoma after Chimeric antigen Receptor T cell Therapy*. N Engl J Med. 375. 2561-2569 (2016)



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Meng M, et al., *Cigarette smoke extracts induce overexpression of the proto-oncogenic gene interleukin-13 receptor alpha2 through activation of the PKA-CREB signaling pathway to trigger malignant transformation of lung vascular endothelial cells and angiogenesis.* Cell. Signal. 31, 15-25 (2017)

Tu M, et al., *IL-13 receptor alpha2 stimulates human glioma cell growth and metastasis through the Src/PI3K/Akt/mTOR signaling pathway* Tumour Biol. 37 (11), 14701-14709 (2016)

Figueiredo AL, et al., *Receptor Antagonist of IL-13 Exerts a Potential Negative Regulation During Early Infection of Human Schistosomiasis* Scand. J. Immunol. 84 (5), 284-290 (2016)

Applications

1. May be used for in vitro IL13RA2 mediated human tumor cell activation in Src/PI3k/Akt/mTOR signaling pathway regulation study with this protein either as soluble factor or as coating matrix protein.
2. May be used for protein-protein interaction assay.
3. Potential therapeutic protein, which could be used for glioblastoma cancer therapy using CAR-T based strategy.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGFDTEIKVNPPQDFEIVDPGYLGYLQLWQPPLSLDH
FKECTVEYELKYRNIGSETWKTIIITKNLHYKDGFDLNKGIEAKIHTLLPWQCTNGSEVQSSWAE
TTYWISPQGIPEKTVQDMDCVYYNWQYLLCSWKPGIGVLLDTNYNLFYWYEGLDHALQCVDYIK
ADGQNI GCRFPYLEASDYKDFYICVNGSSENKPIRSSYFTFQLQNI VKPLPPVYLTF TRESSCE
IKLKWSIPLGPIPARCFDYEIEIREDDTTLVTATVENETYTLKTTNETRQLCFVVR SKVNIYCS
DDGIWSEWSDKQCWEGEDLSKKTLLR