



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human FAM49A -11R Protein
Catalog Number: hRP-2749
Manufacturer: LD Biopharma, Inc.

Introduction

Human FAM49 family have at least two members, FAM49A and FAM49B. We know very little about FAM49A gene function, except it is highly enriched in neocortex. Recent data indicated that CYRI, which is Fam49 related protein in Dictyostelium, is a regulator of the dynamics of the Rac1-Scar/WAVE pathway, providing plasticity and adding complexity to leading-edge dynamics. FAM49B has been demonstrated to play important role in controlling actin dynamics in T cell activation pathway.

Full-length human FAM49A cDNA (322aa, derived BC038971) was constructed with codon optimization using gene synthesis technology and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal and 11 Poly-Arginine (11R) tag at its C-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: FAM49A
Accession Number: NP_110424
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, DTT and Others.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Fort L, et al., *Fam49/CYRI interacts with Rac1 and locally suppresses protrusions*. Nat Cell Biol. Oct: 20(10): 1159-1171. (2018)



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Chen C, et al., *Genetic variants of MGMT, RHPN2, and FAM49A contributed to susceptibility of nonsyndromic orofacial clefts in a Chinese population*. J. Oral Pathol. Med. 47 (8), 796-801 (2018)

Applications

1. May be used for in vitro FAM49A mediated signaling pathway regulation study for neuronal cells differentiation by directly intracellular delivery of this 11R tag FAM49A protein .
2. May be used for mapping FAM49A protein-protein interaction.
3. May be used as specific substrate protein for kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. As native human FAM49A immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant human FAM49A-11R Protein Sequence (42.8 kD)

MASMTGGQQMGRGHHHHHHENLYFQGGEFGNLLKVLTREIENYPHFFLDFENAQPTEGEREIWN
QISAVLQDSEISILADLQAYKGAGPEIRDAIQNPNDIQLQEKAWNAVCPVVRLKRFYEF SIRLE
KALQSLLES LTCPPTPTQHLEREQALAKEFAEILHF TLRFD ELKMRNP AIQND FSYYRRTISR
NRINNMHLDIENEVNNEMANRMSLFYAEATPMLKTL SNATMHFVSENKTLPIENTTDCLSTMTS
VCKVMLETPEYRSRFTSEETLMFCMRVMGVII LYDHPVGAFC KTSKIDMKGC I KVLKEQAP
DSVEGLLNALRFTTKHLNDESTSKQIRAMLQESGGGSGPGRRRRRRRRRR