



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human GRB2 Protein
Catalog Number: hRP-1381
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human Growth factor receptor-bound protein 2 (GRB2) gene binds the epidermal growth factor receptor and contains one SH2 domain and two SH3 domains. Its two SH3 domains direct complex formation with proline-rich regions of other proteins, and its SH2 domain binds tyrosine phosphorylated sequences. This gene is similar to the Sem5 gene of *C.elegans*, which is involved in the signal transduction pathway. Recent data indicated that GRB2 plays a role as modifier of b-catenin-dependent Wnt signaling by interacting with Dvl2 and acts downstream of FAK to amplify b-catenin-dependent transcription through a mechanism involving Rac1, Jnk and c-jun.

Full-length human GRB2 cDNA (2 – 217 aa) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its 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: GRB2 (ASH; Grb3-3; MST084; MSTP084; EGFRBP-GRB2)
Accession Number: NP_002077.1
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, DTT and Sucrose.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Steve P, et al., *Integration of the b-Catenin-dependent Wnt pathway with integrin signaling through the adaptor molecule Grb2*. Plos One. Vol:4, Issue 11, e7841.(2013)



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Strunk U, et al., *Role of herpes simplex virus VP11/12 tyrosine-based motifs in binding and activation of the Src family kinase Lck and recruitment of p85, Grb2, and Shc.* J. Virol. 87 (20), 11276-11286 (2013)

Applications

1. May be used for in vitro protein mediated Wnt / b-catenin pathway regulation study in tumor cell transformation or ES cell differentiation with this protein as either coating matrix protein or soluble factor.
2. May be used for GRB2 protein-protein interaction assay.
3. Enzymatic substrate for various proteases.
4. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHENLYFQGGSEAI AKYDFKATADDELSFKRGDILKVLNEECDQNWY
KAELNGKDGFI PKNYIEMKPHPWFFGKI PRAKAEEMLSKQRHDGAFLIRESESAPGDFSLSVKF
GNDVQHFVKVLRDGAGKYFLWVVKFNLSLNELVDYHRSTSVSRNQQIFLRDIEQVPQQPTYVQALF
DFDPQEDGELGFRRGDFIHVMDNSDPNWWKGACHGQTGMFPRNYVTPVNRNV