

# Recombinant Human DP13A Protein

**For Research Use Only**

## 1. Basic Product Information

Catalog No.: REP50261

Size: 10ug, 100ug

Protein Name: DCC-interacting protein 13-alpha (Dip13-alpha) (Adapter protein containing PH domain, PTB domain and leucine zipper motif 1)

Synonym: APPL1, APPL, DIP13A, KIAA1428

UniProt ID: Q9UKG1

UniProt Link: [www.uniprot.org/uniprotkb/Q9UKG1/entry](http://www.uniprot.org/uniprotkb/Q9UKG1/entry)

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 709 AA

Molecular Weight: 80 KD

Protein Tag: C-terminal His6

## 2. Amino Acid Sequence

MPGIDKLPHEETLEDSPQTRSLLGVFEEDATAISNYMNQLYQAMHRIYDAQNELSAATHLTSKLLKEY  
EKQRFPLGGDDEVMSSTLQQFSKVIDELSSCHAVLSTQLADAMMFPIQFKERDLKEILTLKEVFQIA  
SNDHDAAINRYSRLSKKRENDKVKEYETEDVYTSRKKQHQTMMHYFCALNTLQYKKKIALLEPLLGY  
MQAQISFFKMGSENLEQLEEFLANIGTSVQNVREMDSDIETMQQTIEDLEVASDPLYVPDPDPTK  
FPVNRNLTRKAGYLNARNKTGLVSSTWDRQFYFTQGGNLMSQARGDVAGGLAMDIDNCSVMAVD  
CEDRRYCFQITSFDGKKSSILQAESKKDHEEWICTINNISKQIYLSNPEETAARVNQSALEAVTPSPS  
FQQRHESLRPAAGQSRPPTARTSSSGSLGSESTNLAALSLDSLVPDTPIQFDIISPVCEDQPGQAK  
AFGQGGRRRTNPFGESGGSTKSETEDSILHQLFIVRFLGSMEVKSDDHPDVVYETMRQILAAARAIHNIF  
RMTESHLVTCCLKLIDPQTQVTRLTFPLPCVVLYATHQENKRLFGFVLRVTSSGRSESNLSSVCYIF  
ESNNEGEKICDSVGLAKQIALHAELDRRASEKQKEIERVKEKQKELNKQKQIEKDLEEQSRLIAASS  
RPNQASSEGGFVVLSSSQSEESDLGEGGKKRESEA

## 3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.



Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

## 4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

## 5. Product Description

This product is recombinant DCC-interacting protein 13-alpha (Dip13-alpha) (Adapter protein containing PH domain, PTB domain and leucine zipper motif 1) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

**Protein Function:** Multifunctional adapter protein that binds to various membrane receptors, nuclear factors and signaling proteins to regulate many processes, such as cell proliferation, immune response, endosomal trafficking and cell metabolism (PubMed:10490823, PubMed:15016378, PubMed:19661063, PubMed:26073777, PubMed:26583432). Regulates signaling pathway leading to cell proliferation through interaction with RAB5A and subunits of the NuRD/MeCP1 complex (PubMed:15016378). Functions as a positive regulator of innate immune response via activation of AKT1 signaling pathway by forming a complex with APPL1 and PIK3R1 (By similarity). Inhibits Fc-gamma receptor-mediated phagocytosis through PI3K/Akt signaling in macrophages (By similarity). Regulates TLR4 signaling in activated macrophages (By similarity). Involved in trafficking of the TGFBR1 from the endosomes to the nucleus via microtubules in a TRAF6-dependent manner (PubMed:26583432). Plays a role in cell metabolism by regulating adiponectin and insulin signaling pathways (PubMed:19661063, PubMed:24879834, PubMed:26073777). Required for fibroblast migration through HGF cell signaling (By similarity). Positive regulator of beta-catenin/TCF-dependent transcription through direct interaction with RUVBL2/reptin resulting in the relief of RUVBL2-mediated repression of beta-catenin/TCF target genes by modulating the interactions within the beta-catenin-reptin-HDAC complex (PubMed:19433865).

**Subcellular Localization:** Early endosome membrane ; Peripheral membrane protein . Nucleus . Cytoplasm . Endosome . Cell projection, ruffle . Cytoplasmic vesicle, phagosome . Note=Early endosomal membrane-bound and nuclear. Translocated into the nucleus upon release from endosomal membranes following internalization of EGF.

## 6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.