

Recombinant Human GLYR1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50378

Size: 10ug, 100ug

Protein Name: Cytokine-like nuclear factor N-PAC (NPAC) (3-hydroxyisobutyrate dehydrogenase-like protein) (Glyoxylate reductase 1 homolog) (Nuclear protein NP60) (Nuclear protein of 60 kDa) (Nucleosome-destabilizing factor) (hNDF) (Putative oxidoreductase GLYR1)

Synonym: GLYR1, HIBDL, NDF, NP60, NPAC

UniProt ID: Q49A26

UniProt Link: www.uniprot.org/uniprotkb/Q49A26/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 553 AA

Molecular Weight: 61 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAAVSLRLGDLVWGKLGRYPPWPGKIVNPPKDLKKPRGKKCFVKKFFGTEDHAWIKVEQLKPYHAH
KEEMIKINKGKRFQQAVIDAVEEFLRRAKGKDQTSSHNSSDDKNRRNSSEERSRPNSGDEKRKLSLS
EGKVKKNMGEGKKRVSSGSSERGSKSPLKRAQEQSPRKRGRPPKDEKDLTIPESSTVKGMMAGP
MAAFKWQPTASEPVKDADPHFHHFLLSQTEKPAVCYQAITKKLKICEEETGSTSIQAADSTAVNGSIT
PTDKKIGFLGLGLMGSGIVSNLLKMGHTVTWVNRRTAEKCDLFIQEGARLGRTPAEVVSTCDITFACVS
DPKAAKDLVLGPSGVLQGIRPGKCYVDMSTVDADTVTELAQVIVSRGGRFLEAPVSGNQQLSNDGM
LVILAAGDRGLYEDCSSCFQAMGKTSFFLGEVGNAAKMMLIVNMVQGSFMATIAEGLTLAQVTGQS
QQTLDDILNQGLASIFLDQKCNILQGNFKPDFYLYIKQDLRLAIALGDAVNHPTPMAAAANEVYK
RAKALDQSDNDMSAVYRAYIH

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 Cytokine-like nuclear factor N-PAC (NPAC) (3-hydroxyisobutyrate dehydrogenase-like protein) (Glyoxylate reductase 1 homolog) (Nuclear protein NP60) (Nuclear protein of 60 kDa) (Nucleosome-destabilizing factor) (hNDF) (Putative oxidoreductase GLYR1) 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: Cytokine-like nuclear factor with chromatin gene reader activity involved in chromatin modification and regulation of gene expression (PubMed:23260659, PubMed:30970244). Acts as a nucleosome-destabilizing factor that is recruited to genes during transcriptional activation (PubMed:29759984, PubMed:30970244). Recognizes and binds histone H3 without a preference for specific epigenetic markers and also binds DNA (PubMed:20850016, PubMed:30970244). Interacts with KDM1B and promotes its histone demethylase activity by facilitating the capture of H3 tails, they form a multifunctional enzyme complex that modifies transcribed chromatin and facilitates Pol II transcription through nucleosomes (PubMed:23260659, PubMed:29759984, PubMed:30970244). Stimulates the acetylation of 'Lys-56' of nucleosomal histone H3 (H3K56ac) by EP300 (PubMed:29759984). With GATA4, co-binds a defined set of heart development genes and coregulates their expression during cardiomyocyte differentiation (PubMed:35182466). Regulates p38 MAP kinase activity by mediating stress activation of MAPK14/p38alpha and specifically regulating MAPK14 signaling (PubMed:16352664). Indirectly promotes phosphorylation of MAPK14 and activation of ATF2 (PubMed:16352664). The phosphorylation of MAPK14 requires upstream activity of MAP2K4 and MAP2K6 (PubMed:16352664).

Subcellular Localization: Nucleus . Chromosome . Note=Found in actively RNAPolIII-transcribed gene bodies.

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.