

Recombinant Human LEF1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50612

Size: 10ug, 100ug

Protein Name: Lymphoid enhancer-binding factor 1 (LEF-1) (T cell-specific transcription factor 1-alpha) (TCF1-alpha)

Synonym: LEF1

UniProt ID: Q9UJU2

UniProt Link: www.uniprot.org/uniprotkb/Q9UJU2/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 399 AA

Molecular Weight: 44 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MPQLSGGGGGGGGDPPELCATDEMIPFKDEGDPQKEKIFAEISHPEEEGDLADIKSSLVNESEIIPASN
GHEVARQAQTSQEPYHDKAREHPDDGKHPDGGLYNKGPSYSSYSGYIMMPNMNNDPYMSNGSLS
PPIPRTSNKVPVQPSHAVHPLTPLITYSDEHFSPGSHPSHIPSDVNSKQGMSRHPPAPDIPTFYPLS
PGGVGQITPPLGWQQGPVYPITGGFRQPYPSSLSVDTSMSRFSHHMIPGPPGPHTTGIPHPAIVTPQ
VKQEHPTHDSDLMHVKPQHEQRKEQEPKRPHIKKPLNAFMLYMKEMRANVVAECTLKESAAINQIL
GRRWHALSREEQAKYYELARKERQLHMQLYPGWSARDNYGKKKKRKREKLQESASGTGPRMTAA
YI

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 Lymphoid enhancer-binding factor 1 (LEF-1) (T cell-specific transcription factor 1-alpha) (TCF1-alpha) 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: Transcription factor that binds DNA in a sequence-specific manner (PubMed:2010090). Participates in the Wnt signaling pathway (By similarity). Activates transcription of target genes in the presence of CTNNB1 and EP300 (By similarity). PIAG antagonizes both Wnt-dependent and Wnt-independent activation by LEF1 (By similarity). TLE1, TLE2, TLE3 and TLE4 repress transactivation mediated by LEF1 and CTNNB1 (PubMed:11266540). Regulates T-cell receptor alpha enhancer function (PubMed:19653274). Required for IL17A expressing gamma-delta T-cell maturation and development, via binding to regulator loci of BLK to modulate expression (By similarity). Acts as a positive regulator of odontoblast differentiation during mesenchymal tooth germ formation, expression is repressed during the bell stage by MSX1-mediated inhibition of CTNNB1 signaling (By similarity). May play a role in hair cell differentiation and follicle morphogenesis (By similarity).; [Isoform 1]: Transcriptionally activates MYC and CCND1 expression and enhances proliferation of pancreatic tumor cells.; [Isoform 3]: Lacks the CTNNB1 interaction domain and may therefore be an antagonist for Wnt signaling.; [Isoform 5]: Transcriptionally activates the fibronectin promoter, binds to and represses transcription from the E-cadherin promoter in a CTNNB1-independent manner, and is involved in reducing cellular aggregation and increasing cell migration of pancreatic cancer cells.

Subcellular Localization: Nucleus . Note=Found in nuclear bodies upon PIASG binding.

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.