

Recombinant Rat TGFB2 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52453

Size: 10ug, 100ug

Protein Name: Transforming growth factor beta-2 proprotein [Cleaved into: Latency-associated peptide (LAP); Transforming growth factor beta-2 (TGF-beta-2)]

Synonym: Tgfb2

UniProt ID: Q07257

UniProt Link: www.uniprot.org/uniprotkb/Q07257/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 442 AA

Molecular Weight: 51 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MHYCVLRTFLLLHLVPVALSLSTCSTLDMDQFMRKRIEAI RGQILSKLKLTSPPEDYPEPDEVPPVISI
YNSTRDLLQEKASRRAAACERERSDEEYYAKEVYKIDMP SHFPSETVCPVTTSSGSVGSFCSIQSQ
VLCGYLDAIPPTFYRPYFRIVRFDVSTMEKNASNLVKA EFRVFRLQNP KARVAEQRIELYQILKSKDLT
SPTQRYIDSKVVKTRAEGEWLSFDVTDVHEWLHHKDRNLGFKISLH CPCCTFIPSNNYIIPNKSQEL
EARFAGIDGTSTYASGDQKTIKSTRKKSSGKTPHLLMLLP SYRLESQQSSRRRKRALDAAYCFRNV
QDNCCLRPLYIDFKRDLGWKWIHEPKGYNANFCAGACPYLWSSDTQHTKVLSLYNTINPEASASPC
CVSQDLEPLTILYYIGNTPKIEQLSNMIVKSCCKCS

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 Transforming growth factor beta-2 proprotein [Cleaved into: Latency-associated peptide (LAP); Transforming growth factor beta-2 (TGF-beta-2)] 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: [Transforming growth factor beta-2 proprotein]: Precursor of the Latency-associated peptide (LAP) and Transforming growth factor beta-2 (TGF-beta-2) chains, which constitute the regulatory and active subunit of TGF-beta-2, respectively.; [Latency-associated peptide]: Required to maintain the Transforming growth factor beta-2 (TGF-beta-2) chain in a latent state during storage in extracellular matrix. Associates non-covalently with TGF-beta-2 and regulates its activation via interaction with 'milieu molecules', such as LTBP1 and LRRC32/GARP, that control activation of TGF-beta-2.; [Transforming growth factor beta-2]: Multifunctional protein that regulates various processes such as angiogenesis and heart development (By similarity). Activation into mature form follows different steps: following cleavage of the proprotein in the Golgi apparatus, Latency-associated peptide (LAP) and Transforming growth factor beta-2 (TGF-beta-2) chains remain non-covalently linked rendering TGF-beta-2 inactive during storage in extracellular matrix (By similarity). At the same time, LAP chain interacts with 'milieu molecules', such as LTBP1 and LRRC32/GARP, that control activation of TGF-beta-2 and maintain it in a latent state during storage in extracellular milieu (By similarity). Once activated following release of LAP, TGF-beta-2 acts by binding to TGF-beta receptors (TGFB1 and TGFB2), which transduce signal (By similarity).

Subcellular Localization: [Latency-associated peptide]: Secreted, extracellular space, extracellular matrix .; [Transforming growth factor beta-2]: Secreted .

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.