

Recombinant Human RELB Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50842

Size: 10ug, 100ug

Protein Name: Transcription factor RelB (I-Rel)

Synonym: RELB

UniProt ID: Q01201

UniProt Link: www.uniprot.org/uniprotkb/Q01201/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 579 AA

Molecular Weight: 62 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MLRSGPASGPSVPTGRAMPSRRVARPPAAPELGALGSPDLSSLSLAVSRSTDELEIIDEYIKENGFG
L DGGQPGPGEGLPRLVSRGAASLSTVTLGPVAPPATPPPWGCPGLRLVSPAPGPGPQPHLVITEQPK
Q RGMRFRYECEGRSAGSILGESSTEASKTLPALIELRDCGGLREVEVTACLWKDWPHRVHPHSLVG
K DCTD GICRVRLRPHVSPRHSFNNLGIQCVRKKEIEAAIERKIQLGIDPYNAGSLKNHQEVD MNVVR
I CFQASYRDQQGQMRRMDPVLSEPVYDKKSTNTSELRICRINKESGPCTGGEELYLLCDKVQKEDIS
V VFSRASWEGRADFSQADVHRQIAIVFKTPPYEDLEIVEPVTNVNVLQRLTDGVCSEPLPFTYLPRDH
D SYGVDKKRKRGMMPDVLGELNSSDPHGIESKRRKKKPAILDHFLPNHGSGPFLPPSALLPDPDFFSG
T VSLPGLEPPGGPDLLDDGFAYDPTAPTFTMLDLLPPAPPHASAVVCSGGAGAVVGETPGPEPLTL
D SYQAPGPGDGGTASLVGSNMFPNHYREAAFGGGLSPGPEAT

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 Transcription factor RelB (I-Rel) 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: NF-kappa-B is a pleiotropic transcription factor which is present in almost all cell types and is involved in many biological processes such as inflammation, immunity, differentiation, cell growth, tumorigenesis and apoptosis. NF-kappa-B is a homo- or heterodimeric complex formed by the Rel-like domain-containing proteins RELA/p65, RELB, NFKB1/p105, NFKB1/p50, REL and NFKB2/p52. The dimers bind at kappa-B sites in the DNA of their target genes and the individual dimers have distinct preferences for different kappa-B sites that they can bind with distinguishable affinity and specificity. Different dimer combinations act as transcriptional activators or repressors, respectively. NF-kappa-B is controlled by various mechanisms of post-translational modification and subcellular compartmentalization as well as by interactions with other cofactors or corepressors. NF-kappa-B complexes are held in the cytoplasm in an inactive state complexed with members of the NF-kappa-B inhibitor (I-kappa-B) family. In a conventional activation pathway, I-kappa-B is phosphorylated by I-kappa-B kinases (IKKs) in response to different activators, subsequently degraded thus liberating the active NF-kappa-B complex which translocates to the nucleus. NF-kappa-B heterodimeric RelB-p50 and RelB-p52 complexes are transcriptional activators. RELB neither associates with DNA nor with RELA/p65 or REL. Stimulates promoter activity in the presence of NFKB2/p49. As a member of the NUPR1/RELB/IER3 survival pathway, may provide pancreatic ductal adenocarcinoma with remarkable resistance to cell stress, such as starvation or gemcitabine treatment. Regulates the circadian clock by repressing the transcriptional activator activity of the CLOCK-BMAL1 heterodimer in a CRY1/CRY2 independent manner. Increased repression of the heterodimer is seen in the presence of NFKB2/p52. Is required for both T and B lymphocyte maturation and function (PubMed:26385063).

Subcellular Localization: Nucleus . Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Note=Colocalizes with NEK6 in the centrosome.

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.