

Recombinant Rat BATF Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52191

Size: 10ug, 100ug

Protein Name: Basic leucine zipper transcriptional factor ATF-like (B-cell-activating transcription factor) (B-ATF)

Synonym: Batf

UniProt ID: D4A7E1

UniProt Link: www.uniprot.org/uniprotkb/D4A7E1/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 125 AA

Molecular Weight: 14 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MPHSSDSSDSSFSRSPPPGKQDSSDDVRKVQRREKNRIAAQKSQRQRQTQKADTLHLESEDLEKQN
AALRKEIKQLTEELKYFTSVLSSHEPLCSVLASGTPSPPEVVYSAHAFHQPHISSPRFQP

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 Basic leucine zipper transcriptional factor ATF-like (B-cell-activating transcription factor) (B-ATF) 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: AP-1 family transcription factor that controls the differentiation of lineage-specific cells in the immune system: specifically mediates the differentiation of T-helper 17 cells (Th17), follicular T-helper cells (Tfh), CD8(+) dendritic cells and class-switch recombination (CSR) in B-cells. Acts via the formation of a heterodimer with JUNB that recognizes and binds DNA sequence 5'-TGA[CG]TCA-3'. The BATF-JUNB heterodimer also forms a complex with IRF4 (or IRF8) in immune cells, leading to recognition of AICE sequence (5'-TGAnTCA/GAAA-3'), an immune-specific regulatory element, followed by cooperative binding of BATF and IRF4 (or IRF8) and activation of genes. Controls differentiation of T-helper cells producing interleukin-17 (Th17 cells) by binding to Th17-associated gene promoters: regulates expression of the transcription factor RORC itself and RORC target genes such as IL17 (IL17A or IL17B). Also involved in differentiation of follicular T-helper cells (Tfh) by directing expression of BCL6 and MAF. In B-cells, involved in class-switch recombination (CSR) by controlling the expression of both AICDA and of germline transcripts of the intervening heavy-chain region and constant heavy-chain region (I(H)-C(H)). Following infection, can participate in CD8(+) dendritic cell differentiation via interaction with IRF4 and IRF8 to mediate cooperative gene activation. Regulates effector CD8(+) T-cell differentiation by regulating expression of SIRT1. Following DNA damage, part of a differentiation checkpoint that limits self-renewal of hematopoietic stem cells (HSCs): up-regulated by STAT3, leading to differentiation of HSCs, thereby restricting self-renewal of HSCs (By similarity).

Subcellular Localization: Nucleus . Cytoplasm . Note=Present in the nucleus and cytoplasm, but shows increased nuclear translocation after activation of T-cells.

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.