

Recombinant Human NFAC4 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50712

Size: 10ug, 100ug

Protein Name: Nuclear factor of activated T-cells, cytoplasmic 4 (NF-ATc4) (NFATc4) (T-cell transcription factor NFAT3) (NF-AT3)

Synonym: NFATC4, NFAT3

UniProt ID: Q14934

UniProt Link: www.uniprot.org/uniprotkb/Q14934/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 902 AA

Molecular Weight: 95 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MGAASCEDEEELFKLVFGEEKEAPPLGAGGLGEELDSEDAPPCCRLALGEPPPYGAAPIGIPRPPPP
RPGMHSPPPRPAPSPGTWESQPARSVRLGGPGGGAGGAGGGRVLECPSIRITSISPTPEPPAALED
NPDWGDGSPRDYPPPEGFGGYREAGGQGGGAFFSPSPGSSSLSSWSFFSDASDEAALYAACDE
VESELNEAASRFGLSPLSPRASRPWTPEDPWSLYGPSPGGRGPEDSWLLLSAPGPTPASRP
ASPCGKRRYSSSGTPSSASPALSRRGSLGEEGSEPPPPPLPLARDPGSPGPFDYVGAPPAESIPQ
KTRRTSSEQAVALPRSEEPASCNGKLPLGAEESVAPPGGSRKEVAGMDYLAVPSPLAWSKARIGGH
SPIFRTSALPPLDWPLPSQYEQLELRVQRAHRAHYETEGSRGAVKAAPGGHPVVKLLGYSEKP
LTLQMFIGHTADERNLRPHAFYQVHRITGKMVATASYEAVVSGTKVLEMTLLPENNMAANIDCAGILKL
RNSDIELRKGETDIGRKNTRVRLVFRVHVPQGGGKVVSVQAASVPIECSQRS AQELPQVEAYSPSA
CSVRGGEELVLTGSNFLPDSKVVFIERGPDGKLQWEEETVNRQLQSNEVTLTLTVPEYSNKRVS RP
VQVYFYVSNRRKRSPQTQSFRLPVICKEEPLDSSLRGFPSASATPFGTDMDFSPRPPYPSPYH
EDPACETPYLSEFGYGMPLYPQTGPPPSYRPLRMFPETRGTGCAQPPAVSFLPRPFPSDPY
GGRGSSFSGLPLFSPAPFRPPPLPASPPLEGPFPSQSDVHPLPAEGYNKVGPGYGPGEGAPEQE
KSRGGYSSGFRDSVPIQGITLEEVSEIIGRDLSGFPAPPGEPPA

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 Nuclear factor of activated T-cells, cytoplasmic 4 (NF-ATc4) (NFATc4) (T-cell transcription factor NFAT3) (NF-AT3) 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: Ca(2+)-regulated transcription factor that is involved in several processes, including the development and function of the immune, cardiovascular, musculoskeletal, and nervous systems (PubMed:11514544, PubMed:11997522, PubMed:17213202, PubMed:17875713, PubMed:18668201, PubMed:25663301, PubMed:7749981). Involved in T-cell activation, stimulating the transcription of cytokine genes, including that of IL2 and IL4 (PubMed:18347059, PubMed:18668201, PubMed:7749981). Along with NFATC3, involved in embryonic heart development. Following JAK/STAT signaling activation and as part of a complex with NFATC3 and STAT3, binds to the alpha-beta E4 promoter region of CRYAB and activates transcription in cardiomyocytes (By similarity). Involved in mitochondrial energy metabolism required for cardiac morphogenesis and function (By similarity). Transactivates many genes involved in the cardiovascular system, including AGTR2, NPPB/BNP (in synergy with GATA4), NPPA/ANP/ANF and MYH7/beta-MHC (By similarity). Involved in the regulation of adult hippocampal neurogenesis. Involved in BDNF-driven pro-survival signaling in hippocampal adult-born neurons. Involved in the formation of long-term spatial memory and long-term potentiation (By similarity). In cochlear nucleus neurons, may play a role in deafferentation-induced apoptosis during the developmental critical period, when auditory neurons depend on afferent input for survival (By similarity). Binds to and activates the BACE1/Beta-secretase 1 promoter, hence may regulate the proteolytic processing of the amyloid precursor protein (APP) (PubMed:25663301). Plays a role in adipocyte differentiation (PubMed:11997522). May be involved in myoblast differentiation into myotubes (PubMed:17213202). Binds the consensus DNA sequence 5'-GGAAAT-3' (Probable). In the presence of CREBBP, activates TNF transcription (PubMed:11514544). Binds to PPARG gene promoter and regulates its activity (PubMed:11997522). Binds to PPARG and REG3G gene promoters (By similarity).

Subcellular Localization: Cytoplasm . Nucleus . Note=When hyperphosphorylated, localizes in the cytosol. When intracellular Ca(2+) levels increase, dephosphorylation by calcineurin/PPP3CA leads to translocation into the nucleus (PubMed:11997522, PubMed:18347059). MAPK7/ERK5 and MTOR regulate NFATC4 nuclear export through phosphorylation at Ser-168 and Ser-170 (PubMed:18347059).

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.