

Recombinant Human NFAT5 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50714

Size: 10ug, 100ug

Protein Name: Nuclear factor of activated T-cells 5 (NF-AT5) (T-cell transcription factor NFAT5) (Tonicity-responsive enhancer-binding protein) (TonE-binding protein) (TonEBP)

Synonym: NFAT5, KIAA0827, TONEBP

UniProt ID: O94916

UniProt Link: www.uniprot.org/uniprotkb/O94916/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1531 AA

Molecular Weight: 166 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MPSEDFISLLSADLDLESPKSLYSRESVYDLLPKELQLPPSRETSVASMSQTSGGEAGSPPPAVVAAD
ASSAPSSSSMGGACSSFTTSSSPTIYSTSVTDSKAMQVESCSSAVGVSNRGVSEKQLTSNTVQQHP
STPKRHTVLYISPPPEDLLNSRMSCQDEGCGLESEQSCSMWMEDSPSNFSNMSTSSYNDNTEVP
RKSRKRNPQKQRPQVGRDCEESNMDIFDADSAKAPHYVLSQLTTDNKGNSKAGNGTLENQKGTGV
KKSPMLCGQYPVKSEGKELKIVVQPETQHRARYLTEGSRGSKVDRTQQGFPTVKLEGHNEPVVLQV
FVGNDSGRVKPHGFYQACRVTRNTTPCKEVDIEGTTVIEVGLDPSNNMTLAVDCVGILKLRNADVE
ARIGIAGSKKKSTRARLVFRVNMIRKDGSTLTLPSPILCTQPAGVPEILKKSLSHSCSVKGEEVFLI
GKNFLKGTKVIFQENVSDENSWKSEAEIDMELFHQNHVIVKVPYHDQHITLPVSVGIYVVTNAGRSH
DVQPFTYTPDPAAAGALNVNVKKEISSPARPCSFEEAMKAMKTTGCNLDKVNIPNALMTPLIPSSMI
KSEDTVPMEVTAEKRSSTIFKTTKSVGSTQQTLNENISNIAGNGSFSSPSSSHLPSENEKQQQIQPKAY
NPETLTTIQTQDISQPGTFPAVSASSQLPNSDALLQQATQFQTRETQSREILQSDGTVVNLSQLTEAS
QQQQQSPLQEQAQTLQQQISSNIFSPNSVSQQLQNTIQQQLQAGSFTGSTASGSSGSVDLVQQVLEA
QQQLSSVLFSAPDGNENVQEQLSADIFQQVSVQIQSGVSPGMFSSSTEPTVHTRPDNLLPGRAESVHP
QSENTLSNQQQQQQQQQQVMESSAAMVMEMQQSICQAAAIQSELPSTASANGNLQQSPVYQQ
TSHMMSALSTNEDMQMQCELFSSPPAVSGNETSTTTTQQVATPGTTMFQTSSSGDGEETGTQAKQ
IQNSVFQTMVQMQRHSGDNQPVNLFSSSTKSMMSVQNSGTQQQGNGLFQQGNEMMSLQSGNFLQ
QSSHSQAQLFHPQNPIADAQNLQSETQGSFLHSPNPVHSQTSTTSSEMQMPPMFHSQSSTIAVLQG
SSVPQDQQSTNIFLSQSPMNNLQNTNTVAQEAFFAAPNSISPLQSTSNSEQQAAAFQQQAPISHIQTPM



LSQEQAQPPQQGLFQPQVALGSLPPNPMPQSQQGTMTFQSQHSIVAMQSNSPSQEQQQQQQQQQQ
QQQQQQQQSILFSNQNTMATMASPKQPPPNMIFNPQNPMANQEQQNQSFHQSNMAPMNQEQ
QPMQFQSQSTVSSLQNPQPTQSESSQTPLFHSSPQIQLVQGSPSSQEQQVTLFLSPASMSALQTSI
NQQDMQQSPLYSPQNNMPGIQGATSSPQPQATLHNTAGGTMNQLQNSPGSSQQTSGMFLFGIQ
NNCSQLLTSGPATLPDQLMAISQPGQPQNEGQPPVTTLLSQQMPENSPASSINTNQNIKIDLLVSL
QNQGNLTGSF

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 5 (NF-AT5) (T-cell transcription factor NFAT5) (Tonicity-responsive enhancer-binding protein) (TonE-binding protein) (TonEBP) 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 involved, among others, in the transcriptional regulation of osmoprotective and inflammatory genes (PubMed:10377394, PubMed:11485737, PubMed:41652173). Binds the DNA consensus sequence 5'-[ACT][AG]TGGAAA[CAT]A[TA][ATC][CA][ATG][GT][GAC][CG][CT]-3' (PubMed:10377394, PubMed:11485737). Mediates the transcriptional response to hypertonicity (PubMed:10051678). Positively regulates the transcription of LCN2 and S100A4 genes; optimal transactivation of these genes requires the presence of DDX5/DDX17 (PubMed:22266867). Also involved in the DNA damage response by preventing formation of R-loops; R-loops are composed of a DNA:RNA hybrid and the associated non-template single-stranded DNA (PubMed:34049076).

Subcellular Localization: Nucleus . Cytoplasm . Chromosome . Note=Nuclear distribution increases under hypertonic conditions (By similarity). Recruited to sites of R-loop-associated DNA damage following poly-ADP-ribosylation by PARP1 (PubMed:34049076).

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.