TRF1 Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	TRF1, Monoclonal Antibody
Full Product Name	MOUSE ANTI HUMAN TRF1
Product Gene Name	anti-TRF1 antibody
Clonality	Monoclonal
Isotype	IgG1
Clone Number	BED5
Host	Mouse
Form/Format	Purified Purified IgG - liquid
Concentration	IgG concentration 1.0mg/ml (lot specific)
Preparation and Storage	Store at 4 degree C or at -20 degree C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use. Shelf Life: 18 months from date of despatch.
Molecular Weight	48,239 Da
OMIM	600951
3D Structure	ModBase 3D Structure for P54274
Perservative Stabilisers	0.09% Sodium Azide (NaN3) Preparation||Purified IgG prepared by affinity chromatography on Protein G
Immunogen	Recombinant TRF1 Histology Positive Control Tissue||Human tonsil Buffer Solution||Phosphate buffered saline
Target Species	Human
Applications Tested/Suitable for anti-TRF1 antibody	Immunohistology Frozen, ELISA (EIA), Immunohistology Paraffin*
Application Notes for anti-TRF1 antibody	**Immunohistology - Paraffin:** Minimum Dilution: 1/200; Maximum Dilution: 1/1000; Application Note: **This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.**
Related Product Information for anti-TRF1 antibody	Mouse anti human TRF1 antibody, clone BED5 recognizes TTAGGG repeat binding factor 1 (TRF1) a ubiquitously expressed 60kDa protein. Along with tankyrase-1, TIN2, and PINX1, TRF1 binds the double-stranded TTAGGG repeat of telomeres and regulates telomere length. Protection of telomeres-1 (POT1) is a single-stranded telomeric DNA-binding protein which controls the elongation of telomeres by telomerase. TRF1 mediates the loading of POT1 onto single stranded DNA, conveying information about telomere length to the telomere terminus, where telomerase is regulated. If the telomere is long enough, telomerase is inhibited. Additionally in conjunction with POT1 and TTAGGG repeat binding factor 1 (TRF2), TRF1 recruits factors to the telomere, inducing the formation of the protective t-loop. TRF1 along with TRF2, POT1, TIN2, TPP1, and Rap1 form the shelterin complex which distinguishes telomeres from sites of DNA damage. TRF1 is thought to play a role in leukaemia being expressed at significantly higher levels in patients with acute lymphoblastic leukaemia than those with myeloid leukaemia (Ohyashiki et al. 2001). Mouse anti human TRF1 antibody, clone BED5 has been reported to work in Western blotting applications.

Other Notes	Small volumes of anti-TRF1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for TRF1 purchase	MBS216283 is an antibody targeting TRF1. Also known as MOUSE ANTI HUMAN TRF1. Host: Mouse.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TRF1. It may not necessarily be applicable to this product.

NCBI GI #	189409140
NCBI GeneID	7013
NCBI Accession #	NP_003209.2
UniProt Primary Accession #	P54274
UniProt Secondary Accession #	Q15553; Q8NHT6; Q93029; A7XP29
UniProt Related Accession #	P54274
GenBank Nucleotide #	NM_003218.3
NCBI Official Full Name	telomeric repeat-binding factor 1 isoform 2
NCBI Official Synonym Full Names	telomeric repeat binding factor (NIMA-interacting) 1
NCBI Official Symbol	TERF1
NCBI Official Synonym Symbols	TRF; PIN2; TRF1; TRBF1; t-TRF1; hTRF1-AS
UniProt Protein Name	Telomeric repeat-binding factor 1
UniProt Synonym Protein Names	NIMA-interacting protein 2; TTAGGG repeat-binding factor 1; Telomeric protein Pin2/TRF1
Protein Family	DNA-binding protein
UniProt Gene Name	TERF1
UniProt Synonym Gene Names	PIN2; TRBF1; TRF; TRF1
UniProt Entry Name	TERF1_HUMAN
NCBI Protein Information	telomeric repeat-binding factor 1; NIMA-interacting protein 2; TTAGGG repeat-binding factor 1; telomeric protein Pin2/TRF1
NCBI Summary for TRF1	This gene encodes a telomere specific protein which is a component of the telomere nucleoprotein complex. This protein is present at telomeres throughout the cell cycle and functions as an inhibitor of telomerase, acting in cis to limit the elongation of individual chromosome ends. The protein structure contains a C-terminal Myb motif, a dimerization domain near its N-terminus and an acidic N-terminus. Two transcripts of this gene are alternatively spliced products. [provided by RefSeq, Jul 2008]

UniProt Comments for TRF1	TRF1: a telomeric repeat binding factor. Binds the telomeric double-stranded TTAGGG repeat and negatively regulates telomere length. Colocalizes with telomeric DNA in interphase and metaphase cells and is located at chromosome ends during metaphase. Involved in the regulation of the mitotic spindle. Expression is tightly regulated during the cell cycle; levels are low in G1 and S phase and increase during G2 phase and mitosis. Two splice variant isoforms have been described. Protein type: DNA-binding Chromosomal Location of Human Ortholog: 8q21.11 Cellular Component: nucleoplasm; chromosome, telomeric region; nuclear telomere cap complex; nuclear chromosome, telomeric region; cytoplasm; nucleolus; spindle; nucleus Molecular Function: protein binding; protein homodimerization activity; DNA binding; protein heterodimerization activity; microtubule binding; telomeric DNA binding; double-stranded telomeric DNA binding; chromatin binding; DNA bending activity Biological Process: response to drug; mitosis; positive regulation of mitosis; negative regulation of telomere maintenance via semi-conservative replication; positive regulation of apoptosis; positive regulation of microtubule polymerization; telomere maintenance via telomerase; positive regulation of mitotic cell cycle; negative regulation of telomerase activity; cell division; negative regulation of DNA replication; telomeric loop formation; mitotic cell cycle spindle assembly checkpoint; G2/M transition of mitotic cell cycle; age-dependent telomere shortening; telomere maintenance; negative regulation of telomere maintenance via telomerase; protein homooligomerization
Research Articles on TRF1	**1.** Modulating miR-155 expression in cells altered TRF1 levels and TRF1 abundance at telomeres. Compromising TRF1 expression by elevating miR-155 increased telomere fragility and altered the structure of metaphase chromosomes.
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