

Product Name: TFE3 (8N1) Rabbit Monoclonal Antibody
Catalog #: AMRe18821



Summary

Production Name	TFE3 (8N1) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB
Reactivity	Human

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Supplied in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% New type preservative N and 0.05% BSA.
Purification	Affinity purification

Immunogen

Gene Name	TFE3 {ECO:0000303 PubMed:9393982, ECO:0000312 HGNC:HGNC:11752}
Alternative Names	bHLHe33; RCCP2; RCCX1; Tcf3; Tfe3; TFEA;
Gene ID	7030.0
SwissProt ID	P19532.Recombinant protein of human TFE3

Application

Dilution Ratio	WB: 1:1000
Molecular Weight	62kDa

Background

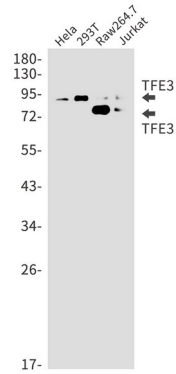
Transcription factor that specifically recognizes and binds E-box sequences (3'-CANNTG-5'). Efficient DNA-binding requires

dimerization with itself or with another MiT/TFE family member such as TFEB or MITF. In association with TFEB, activates the expression of CD40L in T-cells, thereby playing a role in T-cell-dependent antibody responses in activated CD4(+) T-cells and thymus-dependent humoral immunity. Transcription factor that acts as a master regulator of lysosomal biogenesis and immune response (PubMed:[2338243](http://www.uniprot.org/citations/2338243)), PubMed:[29146937](http://www.uniprot.org/citations/29146937)), PubMed:[30733432](http://www.uniprot.org/citations/30733432)), PubMed:[31672913](http://www.uniprot.org/citations/31672913)). Specifically recognizes and binds E-box sequences (5'-CANNTG-3'); efficient DNA-binding requires dimerization with itself or with another MiT/TFE family member such as TFEB or MITF (By similarity). Involved in the cellular response to amino acid availability by acting downstream of MTOR: in the presence of nutrients, TFE3 phosphorylation by MTOR promotes its cytosolic retention and subsequent inactivation (PubMed:[31672913](http://www.uniprot.org/citations/31672913)). Upon starvation or lysosomal stress, inhibition of MTOR induces TFE3 dephosphorylation, resulting in nuclear localization and transcription factor activity (PubMed:[31672913](http://www.uniprot.org/citations/31672913)). In association with TFEB, activates the expression of CD40L in T-cells, thereby playing a role in T-cell-dependent antibody responses in activated CD4(+) T-cells and thymus-dependent humoral immunity (By similarity). Specifically recognizes the MUE3 box, a subset of E-boxes, present in the immunoglobulin enhancer (PubMed:[2338243](http://www.uniprot.org/citations/2338243)). It also binds very well to a USF/MLTF site (PubMed:[2338243](http://www.uniprot.org/citations/2338243)). May regulate lysosomal positioning in response to nutrient deprivation by promoting the expression of PIP4P1 (PubMed:[29146937](http://www.uniprot.org/citations/29146937)). Acts as a positive regulator of browning of adipose tissue by promoting expression of target genes; mTOR-dependent phosphorylation promotes cytoplasmic retention of TFE3 and inhibits browning of adipose tissue (By similarity). Maintains the pluripotent state of embryonic stem cells by promoting the expression of genes such as ESRRB; mTOR-dependent nuclear exclusion promotes exit from pluripotency (By similarity). Required to maintain the naive pluripotent state of hematopoietic stem cell; mTOR-dependent cytoplasmic retention of TFE3 promotes the exit of hematopoietic stem cell from pluripotency (PubMed:[30733432](http://www.uniprot.org/citations/30733432)).

Research Area

Image Data

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Western blot detection of TFE3 in HeLa,293T,Raw264.7, Jurkat using TFE3 antibody.

Note

For research use only.