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TFE3 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP18317b

Specification

TFE3 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	P19532
Other Accession	Q64092, Q05B92, NP_006512
Reactivity	**Human, Mouse**
Predicted	**Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**
Calculated MW	**61521**
Antigen Region	**489-516**

TFE3 Antibody (C-term) - Additional Information

Gene ID 7030

Other Names
Transcription factor E3, Class E basic helix-loop-helix protein 33, bHLHe33, TFE3, BHLHE33

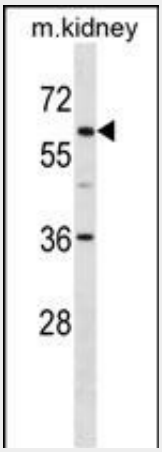
Target/Specificity
This TFE3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 489-516 amino acids from the C-terminal region of human TFE3.

Dilution
WB~~1:1000

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions



TFE3 Antibody (C-term) (Cat. #AP18317b) western blot analysis in mouse kidney tissue lysates (35ug/lane).This demonstrates the TFE3 Antibody detected the TFE3 protein (arrow).

TFE3 Antibody (C-term) - Background

The microphthalmia transcription factor/transcription factor E (MITF-TFE) family of basic helix-loop-helix leucine zipper (bHLH-Zip) transcription factors includes four family members: MITF, TFE3, TFEB and TFEC. The TEF3 protein encoded by this gene activates transcription through binding to the muE3 motif of the immunoglobulin heavy-chain enhancer. The TFEC protein forms heterodimers with the TEF3 protein and inhibits TFE3-dependent transcription activation. The TEF3 protein interacts with transcription regulators such as E2F3, SMAD3, and LEF-1, and is involved in TGF-beta-induced transcription, playing important roles in cell growth, proliferation, and osteoclast and macrophage differentiation. The TFE3 protein also activates

TFE3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

TFE3 Antibody (C-term) - Protein Information

Name TFE3 {ECO:0000303|PubMed:9393982, ECO:0000312|HGNC:HGNC:11752}

Function
Transcription factor that acts as a master regulator of lysosomal biogenesis and immune response (PubMed:2338243, PubMed:29146937, PubMed:30733432, PubMed: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). Upon starvation or lysosomal stress, inhibition of MTOR induces TFE3 dephosphorylation, resulting in nuclear localization and transcription factor activity (PubMed: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). It also binds very well to a USF/MLTF site (PubMed:<a href="http://www.uniprot.org/c
hepatic IRS-2
gene, and induces hexokinase II (HK2) and insulin-induced gene 1
(INSIG1); it participates in insulin signaling and could be a
therapeutic target for diabetes. This gene is also involved in
chromosomal translocations, resulting in different fusion gene
products in papillary renal cell carcinomas and alveolar soft part
sarcomas, such as PRCC-TFE3, RCC17-TFE3, PSF-TFE3, NonO
(p54nrb)-TFE3 and ASPL-TFE3.

TFE3 Antibody (C-term) - References

Argani, P., et al. Am. J. Surg. Pathol. 34(10):1395-1406(2010)
Haudebourg, J., et al. Cancer Genet. Cytogenet. 200(2):75-78(2010)
Chang, I.W., et al. Am. J. Surg. Pathol. 33(12):1894-1901(2009)
Yamaguchi, T., et al. Acta Cytol. 53(6):693-697(2009)
Kuroda, N., et al. Pathol. Int. 59(10):769-770(2009)

itations/2338243" target="_blank">2338243). May regulate lysosomal positioning in response to nutrient deprivation by promoting the expression of PIP4P1 (PubMed: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).

Cellular Location
Cytoplasm, cytosol. Nucleus. Note=When nutrients are present, phosphorylation by MTOR prevents nuclear translocation and activity (PubMed:22692423, PubMed:30733432). Conversely, inhibition of mTORC1, starvation and lysosomal disruption, promotes dephosphorylation and translocation to the nucleus (PubMed:22692423, PubMed:30733432)

Tissue Location
Ubiquitous in fetal and adult tissues.

TFE3 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture