

PRODUCT INFORMATION

Product name : TFE3 antibody

Product type : Primary antibodies

Description : Rabbit polyclonal to TFE3

Immunogen : 3 synthetic peptides (human) conjugated to KLH

Reacts with : Hu, Ms

Tested applications : ELISA, WB and IF

GENE INFORMATION

Gene Symbol : TFE3

Gene Name : transcription factor binding to IGHM enhancer 3

Ensembl ID : ENSG00000068323

Entrez GeneID : 7030

GenBank Accession number : X96717

Swiss-Prot : P19532

Molecular weight of TFE3 : 61.5kDa

Function : Transcription factor that 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. 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. Specifically recognizes the MUE3 box, a subset of E-boxes, present in the immunoglobulin enhancer. It also binds very well to a USF/MLTF site.

Expected subcellular localization : Nucleus.

Expected tissue specificity : Ubiquitous in fetal and adult tissues.

Summary : 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 TFE3 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 TFE3 protein and inhibits TFE3-dependent transcription activation. The TFE3 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 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.[provided by RefSeq]

APPLICATION NOTE

Recommended dilution :

- **ELISA:** Antibody specificity was verified by direct ELISA against the 3 immunogen peptides. A titer of 1/6000 has been determined. Appropriate specificity controls were run.
- **WB (recombinant protein):** 1/2500.
- **WB (cell lysates):** 1/125.
- **IF:** 1/2500.

Optimal dilutions/concentration should be determined by the end user.

Raised in : Rabbit

Clonality : Polyclonal

Isotype : IgG

Purity : Purified antibody

Storage buffer : Containing a final concentration of PBS/glycerol (V/V), 0.1% BSA and 0.01% Thimerosal.

Form : Liquid

Storage instruction : Store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

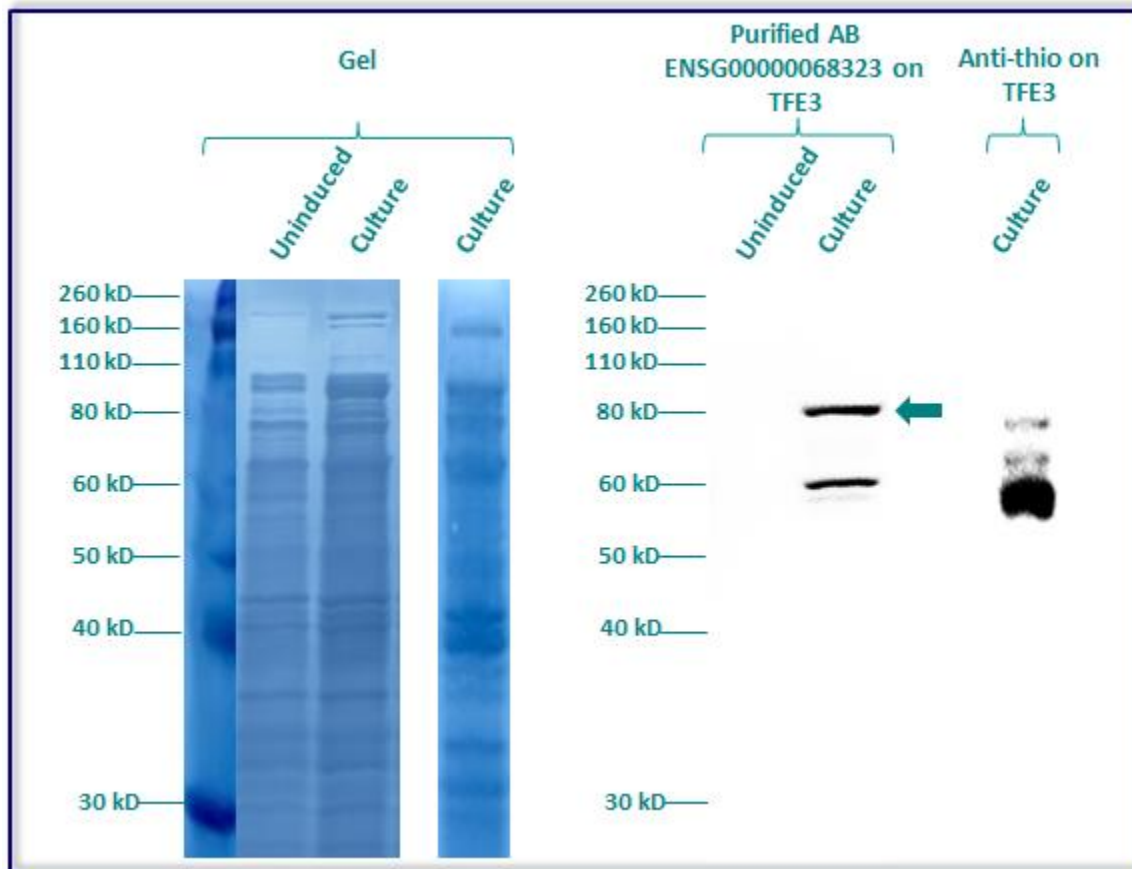
WESTERN BLOT ON RECOMBINANT PROTEIN

The purified antibody ENSG00000068323 has been tested at 1/2500 on uninduced (negative control) and induced culture of E.coli (one shot Top10 competent cells).

An anti-thio has been tested at 1/5000 on induced culture of E.coli (one shot Top10 competent cells) as a positive control.

Plasmid name : pBAD-DEST49.

Molecular weight of TFE3 : 75.5.kDa (61.5kDa + another 14kDa for the tag).



Gel concentration: 10%

Blocking: in 5% non-fat milk-PBST solution

1st Antibody: The antibodies are diluted in blocking buffer.

- Dilute the purified antibody ENSG00000068323 at 1:2500
- Dilute the anti-thio at 1:5000

60 minutes of incubation

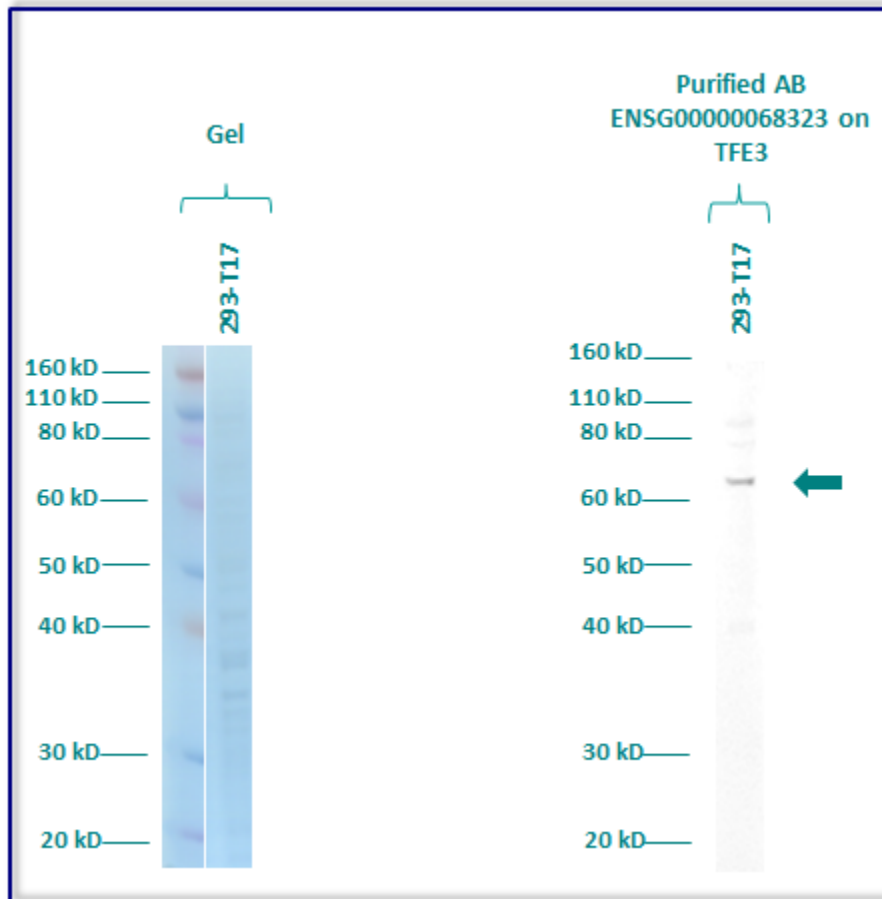
2nd Antibody: The antibody is diluted in blocking buffer.

- Dilute the anti-Rabbit IgG HRP conjugated at 1/10000
- 60 minutes of incubation**

WESTERN BLOT ON CELL LYSTATE

The purified antibody ENSG00000068323 has been tested at a concentration of 1/125 on total protein extract 293T17 cell lines.

Molecular weight of TFE3 : 61.5kDa.



Gel concentration: 10%

Blocking: in 5% non-fat milk-PBST solution

1st Antibody: The antibodies are diluted in blocking buffer.

- Dilute the purified antibody ENSG00000068323 at 1:125
60 minutes of incubation

2nd Antibody: The antibody is diluted in blocking buffer.

- Dilute the anti-Rabbit IgG HRP conjugated at 1/10000
60 minutes of incubation

IMMUNOFLUORESCENCE ANALYSIS

Immunofluorescence analysis of Transcription factor E3 (TFE3) expression in 3 cells lines (293T/17, Capan-2, SH-SY5Y). The purified Antibody ENSG00000068323 has been tested at 1/2500.

Red staining : cytoskeleton (microtubules/ α -tubuline)

Blue staining : nucleus (Hoechst)

Green staining : anti- TFE3 antibody (purified)

Expected subcellular location : Nucleus

Expected tissue specificity : Ubiquitous in fetal and adult tissues

