

TFE3 Antibody

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	72-89	Rabbit	#P19532	7030

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

TFE3 Antibody recognizes endogenous levels of total TFE3 protein. The upper band is presumed to be sumoylated TFE3 protein. This antibody does not cross react with the closely related MITF protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human TFE3 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Transcription factor E3 (TFE3) is a member of a family of basic helix-loop-helix leucine zipper transcription factors that include MITF, TFEB, TFE3, and TFEC. Members of this family form heterodimers with each other, bind the same DNA sequences, and undergo the same types of post-translational modifications, including sumoylation (1). Research studies indicate that TFE3 and other family members play roles in development, organelle biogenesis, nutrient sensing, autophagy, and energy metabolism (2,3). Additional studies report that TFE3 controls the gate for pluripotent cells to exit the state of pluripotency prior to differentiation (4). Translocations involving the *TFE3* gene region have been identified in a number of tumors, including sporadic renal cell tumors. Several specific translocations that result in kidney cancer and involve the *TFE3* gene have been described and characterized in detail (5).

Background References

1. Miller, A.J. et al. (2005) *J Biol Chem* 280, 146-55.
2. Martina, J.A. et al. (2014) *Cell Mol Life Sci* 71, 2483-97.
3. Martina, J.A. et al. (2014) *Sci Signal* 7, ra9.
4. Betschinger, J. et al. (2013) *Cell* 153, 335-47.
5. Kauffman, E.C. et al. (2014) *Nat Rev Urol* 11, 465-75.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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