

TFE3 (P-16): sc-5958



The Power to Question

BACKGROUND

The DNA-binding factor TFE3 contains adjacent helix-loop-helix (HLH) and leucine zipper (LZ) domains flanked by an upstream basic region. These protein motifs are frequently observed in other transcription factors and are particularly common to members of the Myc family. TFE3 is ubiquitously expressed and can directly associate with DNA as either homodimers or heterodimers formed with two related proteins, TFEB or TFEC. TFE3 binds to and activates the microE3 motif of the immunoglobulin heavy-chain enhancer to induce B-cell-specific gene transcription and DNA recombination. TFEB binds to the major late promoter of adenovirus and specifically associates with DNA as both a homodimer and a heterodimer with TFE3. TFEB is expressed at low levels in the embryo but at high levels in the trophoblast cells of the placenta. TFEC shares a bHLH/LZ structure with TFE3 and a closely related protein microphthalmia-associated transcription factor (MITF), which is critically involved in melanocyte differentiation. Unlike TFE3, the expression of TFEC is largely restricted to fibroblasts, myoblasts, chondrosarcoma cells, and myeloma cells.

CHROMOSOMAL LOCATION

Genetic locus: TFE3 (human) mapping to Xp11.23; Tfe3 (mouse) mapping to X A1.1.

SOURCE

TFE3 (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TFE3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-5958 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-5958 X, 200 µg/0.1 ml.

APPLICATIONS

TFE3 (P-16) is recommended for detection of TFE3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). TFE3 (P-16) is also recommended for detection of TFE3 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for TFE3 siRNA (h): sc-38507, TFE3 siRNA (m): sc-38508, TFE3 shRNA Plasmid (h): sc-38507-SH, TFE3 shRNA Plasmid (m): sc-38508-SH, TFE3 shRNA (h) Lentiviral Particles: sc-38507-V and TFE3 shRNA (m) Lentiviral Particles: sc-38508-V.

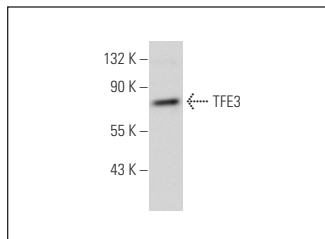
TFE3 (P-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TFE3: 59 kDa.

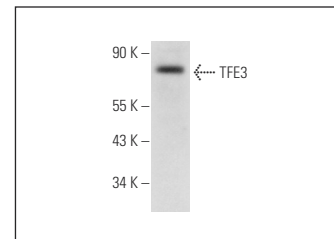
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



TFE3 (P-16): sc-5958. Western blot analysis of TFE3 expression in U-251-MG whole cell lysate.



TFE3 (P-16): sc-5958. Western blot analysis of TFE3 expression in A549 whole cell lysate.

SELECT PRODUCT CITATIONS

- Argani, P., et al. 2003. Aberrant nuclear immunoreactivity for TFE3 in neoplasms with TFE3 gene fusions: a sensitive and specific immunohistochemical assay. *Am. J. Surg. Pathol.* 27: 750-761.
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- Mir, M.C., et al. 2011. Altered transcription factor E3 expression in unclassified adult renal cell carcinoma indicates adverse pathological features and poor outcome. *BJU Int.* 108: E71-E76.
- Spreafico, F., et al. 2011. Clinical and molecular description of a Wilms tumor in a patient with tuberous sclerosis complex. *Am. J. Med. Genet. A* 155A: 1419-1424.
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- Williams, A., et al. 2011. Detection of ASPL/TFE3 fusion transcripts and the TFE3 antigen in formalin-fixed, paraffin-embedded tissue in a series of 18 cases of alveolar soft part sarcoma: useful diagnostic tools in cases with unusual histological features. *Virchows Arch.* 458: 291-300.
- Nagi, F.M., et al. 2011. The expression pattern of Von Hippel-Lindau tumor suppressor protein, MET proto-oncogene, and TFE3 transcription factor oncoprotein in renal cell carcinoma in Upper Egypt. *Ultrastruct. Pathol.* 35: 79-86.
- Dickson, B.C., et al. 2011. TFE3 expression in tumors of the microphthalmia-associated transcription factor (MiTF) family. *Int. J. Surg. Pathol.* 19: 26-30.
- Rao, Q., et al. 2011. Renal cell carcinoma in children and young adults: clinicopathological, immunohistochemical, and VHL gene analysis of 46 cases with follow-up. *Int. J. Surg. Pathol.* 19: 170-179.

RESEARCH USE

For research use only, not for use in diagnostic procedures.