**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, where it plays a critical role in regulating normal vascularization of the placenta. Unlike TFE3, the expression of TFEC is largely restricted to fibroblasts, myoblasts, chondrosarcoma cells and myeloma cells.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: MITF (human) mapping to 3p14.1; Mitf (mouse) mapping to 6 D3.

**SOURCE**

MITF (21D1418) is a mouse monoclonal antibody raised against amino acids 301-312 MITF of human origin.

**PRODUCT**

Each vial contains 100 µg IgG1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

MITF (21D1418) is recommended for detection of MITF of mouse, rat, human, avian and Xenopus laevis origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

MITF (21D1418) is also recommended for detection of MITF in additional species, including equine, bovine and canine.

Suitable for use as control antibody for MITF siRNA (h): sc-35934, MITF siRNA (m): sc-35935, MITF shRNA Plasmid (h): sc-35934-SH, MITF shRNA Plasmid (m): sc-35935-SH, MITF shRNA (h) Lentiviral Particles: sc-35934-V and MITF shRNA (m) Lentiviral Particles: sc-35935-V.

Molecular Weight of MITF: 60 kDa.

Positive Controls: SK-MEL-28 cell lysate: sc-2236, NIH/3T3 nuclear extract: sc-2138 or Jurkat nuclear extract: sc-2132.

**DATA**

**SELECT PRODUCT CITATIONS**


**STORAGE**

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

**RESEARCH USE**

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

**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.