

EDF1 (D-18): sc-70260

BACKGROUND

Angiogenesis is the process of neovascularization and formation of new blood vessels from the established micro-circulation. Endothelial cell differentiation is required for angiogenesis. EDF1 (endothelial differentiation-related factor 1), also known as MBF1 (multiprotein-bridging factor 1) is a 148 amino acid transcriptional co-activator that modulates transcription of genes involved in endothelial differentiation. When endothelial cells are induced to differentiate *in vitro*, EDF1 is downregulated, leading to inhibition of cell growth and cell polarization. EDF1 binds calmodulin through its IQ domain and regulates nitric oxide synthase activity through calmodulin sequestration in the cytoplasm. Though ubiquitously expressed, EDF1 is most abundant in adult liver, heart, adipose tissues, intestine and pancreas. In fetal tissues, EDF1 is most abundant in kidney. There are two isoforms of EDF1 that are produced as a result of alternative splicing events.

REFERENCES

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2. Kabe, Y., et al. 1999. The role of human MBF1 as a transcriptional co-activator. *J. Biol. Chem.* 274: 34196-34202.
3. Mariotti, M., et al. 2000. Interaction between endothelial differentiation-related factor-1 and calmodulin *in vitro* and *in vivo*. *J. Biol. Chem.* 275: 24047-24051.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605107. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Brendel, C., et al. 2002. Multiprotein bridging factor-1 (MBF-1) is a cofactor for nuclear receptors that regulate lipid metabolism. *Mol. Endocrinol.* 16: 1367-1377.
6. Ballabio, E., et al. 2004. The dual role of endothelial differentiation-related factor-1 in the cytosol and nucleus: modulation by protein kinase A. *Cell. Mol. Life Sci.* 61: 1069-1074.
7. Bolognese, F., et al. 2006. Characterization of the human EDF-1 minimal promoter: involvement of NFY and Sp1 in the regulation of basal transcription. *Gene* 374: 87-95.
8. Miotto, B., et al. 2006. Differential gene regulation by selective association of transcriptional co-activators and bZIP DNA-binding domains. *Mol. Cell. Biol.* 26: 5969-5982.
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CHROMOSOMAL LOCATION

Genetic locus: EDF1 (human) mapping to 9q34.3; Edf1 (mouse) mapping to 2 A3.

SOURCE

EDF1 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EDF1 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-70260 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-70260 X, 200 µg/0.1 ml.

APPLICATIONS

EDF1 (D-18) is recommended for detection of EDF1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

EDF1 (D-18) is also recommended for detection of EDF1 in additional species, including equine, bovine and avian.

Suitable for use as control antibody for EDF1 siRNA (h): sc-77227, EDF1 siRNA (m): sc-77228, EDF1 shRNA Plasmid (h): sc-77227-SH, EDF1 shRNA Plasmid (m): sc-77228-SH, EDF1 shRNA (h) Lentiviral Particles: sc-77227-V and EDF1 shRNA (m) Lentiviral Particles: sc-77228-V.

EDF1 (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of EDF1: 16 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.