

## ESE-1 (C-20): sc-17306

### BACKGROUND

ESE-1, a member of the Ets family of transcription factors, critically regulates epithelial cell differentiation and mediates vascular inflammation. ESE-1 is strongly expressed in vascular endothelium and smooth muscle cells, where it is induced in response to inflammatory cytokines and lipopolysaccharides, interacts with NF $\kappa$ B to induce nitric oxide synthase, and is induced during terminal differentiation of epidermal and primary keratinocytes. In addition, ESE-1 is upregulated upon differentiation of corneal epithelium and interacts with Sp1 and AP-1 proteins to induce squamous differentiation marker expression in bronchial epithelial cells.

### REFERENCES

- Oettgen, P., et al. 1997. Isolation and characterization of a novel epithelium-specific transcription factor, ESE-1, a member of the Ets family. *Mol. Cell Biol.* 17: 4419-4433.
- Rudders, S., et al. 2000. ESE-1 is a novel transcriptional mediator of inflammation that interacts with NF $\kappa$ B to regulate the inducible nitric-oxide synthase gene. *J. Biol. Chem.* 276: 3302-3309.
- Yoshida, N., et al. 2000. Ets family transcription factor ESE-1 is expressed in corneal epithelial cells and is involved in their differentiation. *Mech. Dev.* 97: 27-34.
- Reddy, S.P., et al. 2003. Interplay between proximal and distal promoter elements is required for squamous differentiation marker induction in the bronchial epithelium: role for ESE-1, Sp1, and AP-1. *J. Biol. Chem.* 278: 21378-21387.
- Prescott, J.D., et al. 2004. The Ets transcription factor ESE-1 transforms MCF-12A human mammary epithelial cells via a novel cytoplasmic mechanism. *Mol. Cell Biol.* 24: 5548-5564.
- Wang, H., et al. 2004. Positive and negative modulation of the transcriptional activity of the Ets factor ESE-1 through interaction with p300, CREB-binding protein, and Ku 70/86. *J. Biol. Chem.* 279: 25241-25250.

### CHROMOSOMAL LOCATION

Genetic locus: ELF3 (human) mapping to 1q32.1; Elf3 (mouse) mapping to 1 E4.

### SOURCE

ESE-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ESE-1 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17306 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

Store at 4 $^{\circ}$  C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### APPLICATIONS

ESE-1 (C-20) is recommended for detection of ESE-1 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).

ESE-1 (C-20) is also recommended for detection of ESE-1 in additional species, including canine, bovine and avian.

Suitable for use as control antibody for ESE-1 siRNA (h): sc-37851, ESE-1 siRNA (m): sc-37852, ESE-1 shRNA Plasmid (h): sc-37851-SH, ESE-1 shRNA Plasmid (m): sc-37852-SH, ESE-1 shRNA (h) Lentiviral Particles: sc-37851-V and ESE-1 shRNA (m) Lentiviral Particles: sc-37852-V.

ESE-1 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ESE-1: 47 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or A-431 whole cell lysate: sc-2201.

### 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

### SELECT PRODUCT CITATIONS

- Reddy, S.P., et al. 2003. Interplay between proximal and distal promoter elements is required for squamous differentiation marker induction in the bronchial epithelium: role for ESE-1, Sp1, and AP-1 proteins. *J. Biol. Chem.* 278: 21378-21387.
- Lee, S.H., et al. 2008. ESE-1/Egr-1 pathway plays a role in tolferamic acid-induced apoptosis in colorectal cancer cells. *Mol. Cancer Ther.* 7: 3739-3750.
- Cai, Z., et al. 2009. Transcriptional regulation of Tlr11 gene expression in epithelial cells. *J. Biol. Chem.* 284: 33088-33096.

### RESEARCH USE

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



Try **ESE-1 (E-8): sc-376055**, our highly recommended monoclonal alternative to ESE-1 (C-20).