SANTA CRUZ BIOTECHNOLOGY, INC.

# ESE-1 (H-270): sc-28683

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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 NFκB 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


1. 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.
2. Rudders, S., et al. 2000. ESE-1 is a novel transcriptional mediator of inflammation that interacts with NFκB to regulate the inducible nitric-oxide synthase gene. J. Biol. Chem. 276: 3302-3309.
3. 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.
4. 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.
5. 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.
6. Brown, C., et al. 2004. ESE-1 is a novel transcriptional mediator of angiopoietin-1 expression in the setting of inflammation. J. Biol. Chem. 279: 12794-12803.
7. 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 F.

## SOURCE

ESE-1 (H-270) is a rabbit polyclonal antibody raised against amino acids 1-270 mapping at the N-terminus of ESE-1 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-28683 X, 200 µg/0.1 ml.

## APPLICATIONS

ESE-1 (H-270) 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), 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).

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 (H-270) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ESE-1: 47 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.