SANTA CRUZ BIOTECHNOLOGY, INC.

ESE-3A (Z-24): sc-133564

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Epithelium-specific Ets factor, family member-3 (ESE-3) is a distinct member of the ESE subfamily of Ets transcription factors. Ets factors constitute one important class of transcriptional regulators that play critical roles in hematopoiesis, angiogenesis, organogenesis, oncogenesis and specification of neuronal connectivity. ESE-3 shares highest homology with two other epithelium restricted Ets factors, ESE-1 and Elf-5 (also known as ESE-2). ESE-3, like ESE-1 and Elf-5, is exclusively expressed in a subset of epithelial cells, with highest expression detected in glandular epithelium of the prostate, pancreas, salivary gland and trachea. ESE-3 transactivates the c-Met promoter via three high affinity binding sites, which suggests that ESE-3 may contribute to branching morphogenesis. Additionally, ESE-3 may influence later stages of glandular epithelium differentiation, as it binds to the promoter regions of several glandular epithelium-specific genes.

REFERENCES

1. Nelsen, B., et al. 1993. Regulation of lymphoid-specific immunoglobulin μ heavy chain gene enhancer by ETS-domain proteins. Science 261: 82-86.
2. 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.
3. Graves, B.J. et al. 1998. Specificity within the Ets family of transcription factors. Adv. Cancer Res. 75: 1-55.
4. Lin, J.H., et al. 1998. Functionally related motor neuron pool and muscle sensory afferent subtypes defined by coordinate ETS gene expression. Cell 95: 393-407.
5. Wasylyk, B., et al. 1998. Ets transcription factors: nuclear effectors of the Ras-MAP-kinase signaling pathway. Trends Biochem. Sci. 23: 213-216.
6. Kas, K., et al. 2000. ESE-3, a novel member of an epithelium-specific Ets transcription factor subfamily, demonstrates different target gene specificity from ESE-1. J. Biol. Chem. 275: 2986-2998.
7. Oettgen, P. et al. 2000. PDEF, a novel prostate epithelium-specific Ets transcription factor, interacts with the androgen receptor and activates prostate-specific antigen gene expression. J. Biol. Chem. 275: 1216-1225.
8. Tugores, A. et al. 2001. The epithelium-specific ETS protein EHF/ESE-3 is a context-dependent transcriptional repressor downstream of MAPK signaling cascades. J. Biol. Chem. 276: 20397-20406.

CHROMOSOMAL LOCATION

Genetic locus: Ehf (mouse) mapping to 2 E2.

SOURCE

ESE-3A (Z-24) is an affinity purified rabbit polyclonal antibody raised against synthetic ESE-3A peptide of mouse origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

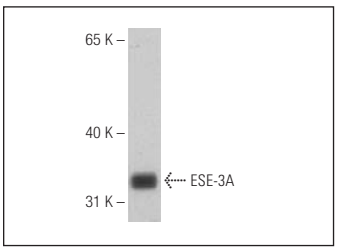
ESE-3A (Z-24) is recommended for detection of ESE-3A of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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-3A siRNA (m): sc-37854, ESE-3A shRNA Plasmid (m): sc-37854-SH and ESE-3A shRNA (m) Lentiviral Particles: sc-37854-V.

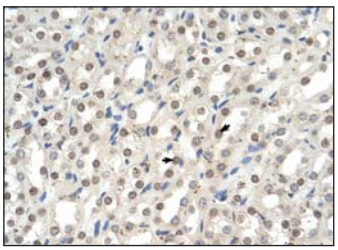
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



ESE-3A (Z-24): sc-133564. Western blot analysis of ESE-3A expression in mouse prostate tissue extract.



ESE-3A (Z-24): sc-133564. Immunoperoxidase staining of formalin-fixed, paraffin-embedded mouse kidney tissue showing nuclear localization.

STORAGE

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

PROTOCOLS

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

RESEARCH USE

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