SANTA CRUZ BIOTECHNOLOGY, INC.

Erg-1/2/3 (C-20): sc-353

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ets-1 is the prototype member of a family of genes identified on the basis of homology to the v-Ets oncogene isolated from the E26 erythroblastosis virus. This family of genes currently includes Ets-1, Ets-2, Erg-1–3, Elk-1, Elf-1, Elf-5, NERF, PU.1, PEA3, ERM, FEV, ER81, Fli-1, TEL, Spi-B, ESE-1, ESE-3A, Net, ABT1 and ERF. Members of the Ets gene family exhibit varied patterns of tissue expression, and share a highly conserved carboxy-terminal domain containing a sequence related to the SV40 large T antigen nuclear localization signal sequence. This conserved domain is essential for Ets-1 binding to DNA and is likely to be responsible for the DNA binding activity of all members of the Ets gene family. Several of these proteins have been shown to recognize similar motifs in DNA that share a centrally located 5'-GGAA-3' element. Erg genes encode for multiple proteins due to alternative splicing and alternative usage of initiation codons.

CHROMOSOMAL LOCATION

Genetic locus: ERG (human) mapping to 21q22.2; Erg (mouse) mapping to 16 C4.

SOURCE

Erg-1/2/3 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Erg-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-353 X, 100 µg/0.1 ml.

Blocking peptide available for competition studies, sc-353 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Erg-1/2/3 (C-20) is recommended for detection of Erg-1, Erg-2 and Erg-3 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Erg-1/2/3 (C-20) is also recommended for detection of Erg-1, Erg-2 and Erg-3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Erg-1/2/3 siRNA (h): sc-35333, Erg-1/2/3 siRNA (m): sc-35334, Erg-1/2/3 shRNA Plasmid (h): sc-35333-SH, Erg-1/2/3 shRNA Plasmid (m): sc-35334-SH, Erg-1/2/3 shRNA (h) Lentiviral Particles: sc-35333-V and Erg-1/2/3 shRNA (m) Lentiviral Particles: sc-35334-V.

Erg-1/2/3 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

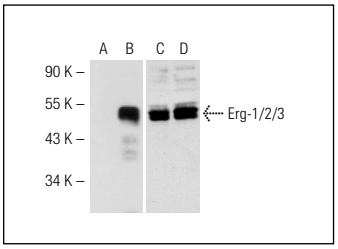
Molecular Weight of Erg-1/2/3: 38/49/55 kDa.

Positive Controls: Erg-1/2/3 (h): 293T Lysate: sc-115805, Jurkat nuclear extract: sc-2132 or Jurkat + PMA nuclear extract: sc-2133.

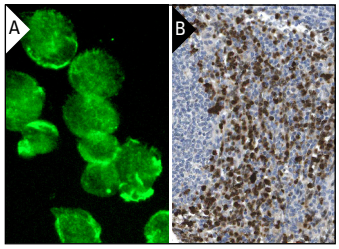
STORAGE

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

DATA



Erg-1/2/3 (C-20): sc-353. Western blot analysis of Erg-1/2/3 expression in non-transfected 293T: sc-117752 (**A**) and human Erg-1/2/3 transfected 293T: sc-115805 (**B**) whole cell lysates and Jurkat (**C**) and Jurkat + PMA (**D**) nuclear extracts.



Erg-1/2/3 (C-20): sc-353. Immunofluorescence staining of methanol-fixed Jurkat cells showing nuclear staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing nuclear and cytoplasmic staining of cells in red pulp. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Hart, A., et al. 1995. Human Erg is a proto-oncogene with mitogenic and transforming activity. Oncogene 10: 1423-1430.
2. Gupta, S., et al. 2010. FZD4 as a mediator of ERG oncogene-induced WNT signaling and epithelial-to-mesenchymal transition in human prostate cancer cells. Cancer Res. 70: 6735-6745.
3. Levin, V.A., et al. 2010. Different changes in protein and phosphoprotein levels result from serum starvation of high-grade glioma and adenocarcinoma cell lines. J. Proteome Res. 9: 179-191.
4. Sperone, A., et al. 2011. The transcription factor Erg inhibits vascular inflammation by repressing NFκB activation and proinflammatory gene expression in endothelial cells. Arterioscler. Thromb. Vasc. Biol. 31: 142-150.
5. Flajollet, S., et al. 2011. Abnormal expression of the ERG transcription factor in prostate cancer cells activates osteopontin. Mol. Cancer Res. 9: 914-924.
6. Chng, K.R., et al. 2012. A transcriptional repressor co-regulatory network governing androgen response in prostate cancers. EMBO J. 31: 2810-2823.
7. Schachterle, W., et al. 2012. ETS-dependent regulation of a distal Gata4 cardiac enhancer. Dev. Biol. 361: 439-449.

RESEARCH USE

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