

ER81 (C-20): sc-1953

BACKGROUND

Several members of the Ets gene family encode sequence-specific DNA binding proteins that recognize DNA sequences with a centrally located 5'-GGAA-3' element. All of the Ets proteins recognize the same central core sequence but each protein interacts with unique sequences that flank this core. PEA3 binds the motif 5'-AGGAAG-3', while ER81 (also designated ETV1) binds the motif 5'-CGGAA/T-3'. PEA3 is expressed at readily detectable levels in cells of epithelial and fibroblastic origin. Unlike other members of the Ets family, including Ets-1 and Ets-2, PEA3 is not expressed in hematopoietic cells. ER81 is highly expressed in brain, testis, lung and heart. ER81 is also moderately expressed in spleen, pancreas, colon and small intestine. During development, ER81, PEA3 and ERM display unique expression patterns which suggest these transcriptional factors play an important role in organogenesis. ERK1 activates ER81 transcriptional activity, while MAPKAP kinase 2 inhibits ER81.

REFERENCES

1. Fisher, C.L., et al. 1991. Ligation of membrane Ig leads to calcium-mediated phosphorylation of the proto-oncogene product, Ets-1. *J. Immunol.* 146: 1743-1749.
2. Brown, T.A. and McKnight, S.L. 1992. Specificities of protein-protein and protein-DNA interaction of GABP- α and two newly defined Ets-related proteins. *Genes Dev.* 12: 2502-2512.
3. Monte, D., et al. 1995. Molecular characterization of the Ets-related human transcription factor ER81. *Oncogene* 11: 771-779.
4. Janknecht, R. 1996. Analysis of the ERK-stimulated Ets transcription factor ER81. *Mol. Cell. Biol.* 16:1550-1556.

CHROMOSOMAL LOCATION

Genetic locus: ETV1 (human) mapping to 7p21.2; Etv1 (mouse) mapping to 12 A3.

SOURCE

ER81 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ER81 of human origin.

PRODUCT

Each vial contains 200 μ g 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-1953 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-1953 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

ER81 (C-20) is recommended for detection of ER81 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).

ER81 (C-20) is also recommended for detection of ER81 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ER81 siRNA (h): sc-37841, ER81 siRNA (m): sc-37842, ER81 shRNA Plasmid (h): sc-37841-SH, ER81 shRNA Plasmid (m): sc-37842-SH, ER81 shRNA (h) Lentiviral Particles: sc-37841-V and ER81 shRNA (m) Lentiviral Particles: sc-37842-V.

ER81 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: HeLa whole cell lysate: sc-2200 or LNCaP cell lysate: sc-2231.

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.

SELECT PRODUCT CITATIONS

1. Goel, A., et al. 2003. Acetylation-mediated transcriptional activation of the Ets protein ER81 by p300, P/CAF, and HER2/Neu. *Mol. Cell. Biol.* 23: 6243-6254.
2. Goel, A., et al. 2004. Concerted activation of Ets protein ER81 by p160 coactivators, the acetyltransferase p300 and the receptor tyrosine kinase HER2/Neu. *J. Biol. Chem.* 279: 14909-14916.
3. Shin, S., et al. 2009. Induction of prostatic intraepithelial neoplasia and modulation of androgen receptor by ETS variant 1/ETS-related protein 81. *Cancer Res.* 69: 8102-8110.
4. Rahim, S., et al. 2011. YK-4-279 inhibits ERG and ETV1 mediated prostate cancer cell invasion. *PLoS ONE* 6: e19343.

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Try **ER81 (1C8B6): sc-293155**, our highly recommended monoclonal alternative to ER81 (C-20).