

PEA3 (1A2G3): sc-130661

BACKGROUND

Several members of the Ets gene family are known to encode sequence-specific DNA binding proteins. These include mouse PU.1, mouse and human Ets-1, *Drosophila* E74, chicken and human Ets-2 and rat GABP- α . Each of these proteins recognizes similar motifs in DNA that share a centrally located 5'-GGAA-3' element. For instance, PEA3 binds the motif 5'-AGGAAG-3' (the PEA-3 motif), but does not bind to the sequence 5'-AGGAAC-3', recognized by PU.1, although PU.1 binds equally well to both sequences. It appears that all of the Ets proteins recognize the same central core sequence but that each protein interacts with unique sequences that flank this core. PEA3 is expressed at readily detectable levels in cells of epithelial and fibroblastic origin but is not expressed in hematopoietic cells. This is in contrast to other members of the Ets gene family, such as Ets-1, Ets-2 and Fli-1, each of which is expressed primarily in cells of hematopoietic origin.

REFERENCES

1. Ghysdael, J., et al. 1986. Identification and preferential expression in thymic and bursal lymphocytes of a c-Ets oncogene-encoded M_r 54,000 cytoplasmic protein. Proc. Natl. Acad. Sci. USA 83: 1714-1718.
2. Rao, V.N., et al. 1987. *erg*, a human Ets-related gene on chromosome 21: alternative splicing, polyadenylation, and translation. Science 237: 635-639.
3. Rao, V.N., et al. 1989. *elk*, tissue-specific Ets-related genes on chromosomes X and 14 near translocation breakpoints. Science 244: 66-70.
4. Burtis, K.C., et al. 1990. The *Drosophila* 74EF early puff contains E74, a complex ecdysone-inducible gene that encodes two ets-related proteins. Cell 61: 85-99.

CHROMOSOMAL LOCATION

Genetic locus: ETV4 (human) mapping to 17q21.31; Etv4 (mouse) mapping to 11 D.

SOURCE

PEA3 (1A2G3) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 50-109 of PEA3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 for detailed protocols and support products.

APPLICATIONS

PEA3 (1A2G3) is recommended for detection of PEA3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PEA3 siRNA (h): sc-36205, PEA3 siRNA (m): sc-36206, PEA3 shRNA Plasmid (h): sc-36205-SH, PEA3 shRNA Plasmid (m): sc-36206-SH, PEA3 shRNA (h) Lentiviral Particles: sc-36205-V and PEA3 shRNA (m) Lentiviral Particles: sc-36206-V.

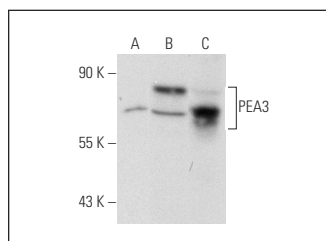
Molecular Weight of PEA3: 62 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, PEA3 (h2): 293T Lysate: sc-173295 or HL-60 nuclear extract: sc-2147.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



PEA3 (1A2G3): sc-130661. Western blot analysis of PEA3 expression in non-transfected: sc-117752 (A) and human PEA3 transfected: sc-173295 (B) 293T whole cell lysates and K-562 nuclear extract (C).

SELECT PRODUCT CITATIONS

1. Ratovitski, E.A. 2010. LKB1/PEA3/ Δ Np63 pathway regulates PTGS-2 (COX-2) transcription in lung cancer cells upon cigarette smoke exposure. Oxid. Med. Cell. Longev. 3: 317-324.
2. Ratovitski, E.A. 2011. Δ Np63 α /IRF6 interplay activates NOS2 transcription and induces autophagy upon tobacco exposure. Arch. Biochem. Biophys. 506: 208-215.

CONJUGATES

See **PEA3 (G-10): sc-166629** for PEA3 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.