

PEA3 (16): sc-113

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.

CHROMOSOMAL LOCATION

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

SOURCE

PEA3 (16) is a mouse monoclonal antibody raised against recombinant PEA3 fusion protein.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain 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-113 X, 200 μ g/0.1 ml.

PEA3 (16) is available conjugated to agarose (sc-113 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-113 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-113 PE), fluorescein (sc-113 FITC), Alexa Fluor[®] 488 (sc-113 AF488), Alexa Fluor[®] 546 (sc-113 AF546), Alexa Fluor[®] 594 (sc-113 AF594) or Alexa Fluor[®] 647 (sc-113 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-113 AF680) or Alexa Fluor[®] 790 (sc-113 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PEA3 (16) is recommended for detection of PEA3 p60 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 immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

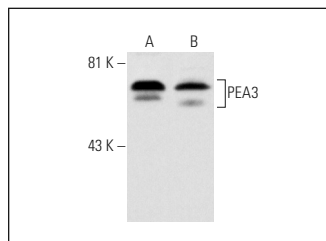
PEA3 (16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PEA3: 62 kDa.

STORAGE

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

DATA



PEA3 (16): sc-113. Western blot analysis of PEA3 expression in K-562 (A) and KNRK (B) nuclear extracts.

SELECT PRODUCT CITATIONS

- Chan, Y.J., et al. 1996. Synergistic interactions between overlapping binding sites for the serum response factor and ELK-1 proteins mediate both basal enhancement and phorbol ester responsiveness of primate cytomegalovirus major immediate-early promoters in monocyte and T-lymphocyte cell types. *J. Virol.* 70: 8590-8605.
- Guo, B. and Sharrocks, A.D. 2009. Extracellular signal-regulated kinase mitogen-activated protein kinase signaling initiates a dynamic interplay between sumoylation and ubiquitination to regulate the activity of the transcriptional activator PEA3. *Mol. Cell. Biol.* 29: 3204-3218.
- Znosko, W.A., et al. 2010. Overlapping functions of Pea3 ETS transcription factors in FGF signaling during zebrafish development. *Dev. Biol.* 342: 11-25.
- Chen, Y., et al. 2011. ER β and PEA3 co-activate IL-8 expression and promote the invasion of breast cancer cells. *Cancer Biol. Ther.* 11: 497-511.
- Wollenick, K., et al. 2012. Synthetic transactivation screening reveals ETV4 as broad coactivator of hypoxia-inducible factor signaling. *Nucleic Acids Res.* 40: 1928-1943.
- Li, S., et al. 2013. Requirement of PEA3 for transcriptional activation of FAK gene in tumor metastasis. *PLoS ONE* 8: e79336.
- Liclican, E.L., et al. 2014. Loss of miR125a expression in a model of K-ras-dependent pulmonary premalignancy. *Cancer Prev. Res.* 7: 845-855.
- Kherrouche, Z., et al. 2015. PEA3 transcription factors are downstream effectors of Met signaling involved in migration and invasiveness of Met-addicted tumor cells. *Mol. Oncol.* 9: 1852-1867.
- Sugita, S., et al. 2017. NUTM2A-CIC fusion small round cell sarcoma: a genetically distinct variant of CIC-rearranged sarcoma. *Hum. Pathol.* 65: 225-230.

RESEARCH USE

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