SANTA CRUZ BIOTECHNOLOGY, INC.

PEA3 (G-10): sc-166629

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (G-10) is a mouse monoclonal antibody raised against amino acids 171-290 of PEA3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-166629 X, 200 µg/0.1 ml.

PEA3 (G-10) is available conjugated to agarose (sc-166629 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166629 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166629 PE), fluorescein (sc-166629 FITC), Alexa Fluor® 488 (sc-166629 AF488), Alexa Fluor® 546 (sc-166629 AF546), Alexa Fluor® 594 (sc-166629 AF594) or Alexa Fluor® 647 (sc-166629 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166629 AF680) or Alexa Fluor® 790 (sc-166629 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PEA3 (G-10) is recommended for detection of PEA3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) 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.

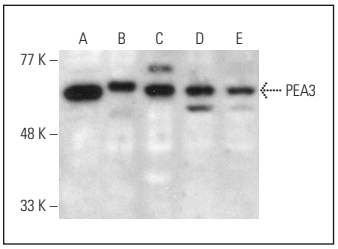
PEA3 (G-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PEA3: 62 kDa.

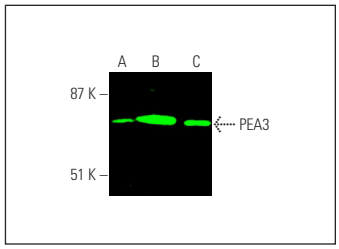
STORAGE

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

DATA



PEA3 (G-10) HRP: sc-166629 HRP. Direct western blot analysis of PEA3 expression in K-562 (**A**), HL-60 (**B**) and KNRK (**C**) nuclear extracts and K-562 (**D**) and MCF7 (**E**) whole cell lysates.



PEA3 (G-10): sc-166629. Near-infrared western blot analysis of PEA3 expression in K-562 whole cell lysate (**A**) and HL-60 (**B**) and KNRK (**C**) nuclear extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

SELECT PRODUCT CITATIONS

1. Zhao, Y., et al. 2010. Involvement of MyoD and PEA3 in regulation of transcription activity of MDR1 gene. Acta Biochim. Biophys. Sin. 42: 900-907.
2. Hsu, H.H., et al. 2014. Apicidin-resistant HA22T hepatocellular carcinoma cells massively promote pro-survival capability via IGF-IR/PI3K/Akt signaling pathway activation. Tumour Biol. 35: 303-313.
3. Bethge, T., et al. 2015. Sp1 sites in the noncoding control region of BK polyomavirus are key regulators of bidirectional viral early and late gene expression. J. Virol. 89: 3396-3411.
4. Peng, Z., et al. 2019. Farnesoid X receptor represses matrix metalloproteinase 7 expression, revealing this regulatory axis as a promising therapeutic target in colon cancer. J. Biol. Chem. 294: 8529-8542.
5. Li, K., et al. 2021. Capicua regulates dendritic morphogenesis through Ets in hippocampal neurons *in vitro*. Front. Neuroanat. 15: 669310.
6. Gao, X., et al. 2022. ETV4 promotes pancreatic ductal adenocarcinoma metastasis through activation of the CXCL13/CXCR5 signaling axis. Cancer Lett. 524: 42-56.
7. Zhou, Y., et al. 2022. Establishment and application of a human osteosarcoma U-2OS cell line that can stably express Cas9 protein. Mol. Cell. Biochem. 477: 2183-2191.
8. Kim, J.W., et al. 2022. Capicua suppresses YAP1 to limit tumorigenesis and maintain drug sensitivity in human cancer. Cell Rep. 41: 111443.

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.