SANTA CRUZ BIOTECHNOLOGY, INC.

EEA1 (281.7): sc-53939

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Early endosomes are cytoplasmic compartments that function in receiving and sorting endocytosed proteins for vesicular transport. EEA1 (early endosome antigen 1) is a peripheral membrane protein that co-localizes with the transferrin receptor and Rab5 on early endosomes. EEA1 contains a calmodulin-binding IQ motif and cysteine rich finger motif necessary for its specific localization to the early endosomes. EEA1 has sequence homology to several yeast proteins that have been implicated in membrane trafficking, including Vps27, Fab1 and Vac1. Evidence suggests a possible role for EEA1 in mediating the regulatory effects of 3'-phosphoinositides on membrane trafficking.

REFERENCES

1. Weisman, L.S., et al. 1992. Molecular characterization of VAC1, a gene required for vacuole inheritance and vacuole protein sorting. J. Biol. Chem. 267: 618-623.
2. Yamamoto, A., et al. 1995. Novel PI(4)P 5-kinase homologue, Fab1p, essential for normal vacuole function and morphology in yeast. Mol. Biol. Cell 6: 525-539.

CHROMOSOMAL LOCATION

Genetic locus: EEA1 (human) mapping to 12q22; Eea1 (mouse) mapping to 10 C2.

SOURCE

EEA1 (281.7) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 82-1411 of EEA1 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.

APPLICATIONS

EEA1 (281.7) is recommended for detection of EEA1 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for EEA1 siRNA (h): sc-35263, EEA1 siRNA (m): sc-35264, EEA1 shRNA Plasmid (h): sc-35263-SH, EEA1 shRNA Plasmid (m): sc-35264-SH, EEA1 shRNA (h) Lentiviral Particles: sc-35263-V and EEA1 shRNA (m) Lentiviral Particles: sc-35264-V.

Molecular Weight of EEA1: 162 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

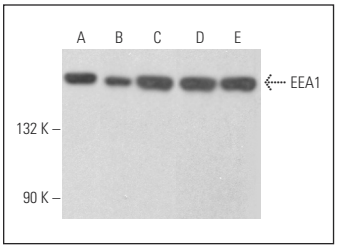
STORAGE

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

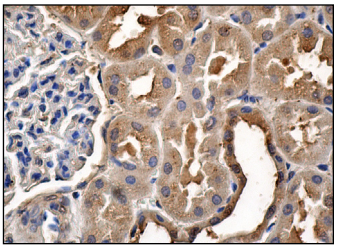
RESEARCH USE

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

DATA



EEA1 (281.7): sc-53939. Western blot analysis of EEA1 expression in JAR (**A**), Jurkat (**B**), HeLa (**C**), HEK293 (**D**) and A-431 (**E**) whole cell lysates.



EEA1 (281.7): sc-53939. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Fabbri, M., et al. 2005. Dynamic partitioning into lipid rafts controls the endo-exocytic cycle of the $\alpha L/\beta_2$ Integrin, LFA-1, during leukocyte chemotaxis. Mol. Biol. Cell 16: 5793-5803.
2. Croxatto, A. and Greub, G. 2010. Early intracellular trafficking of *Waddlia chondrophila* in human macrophages. Microbiology 156: 340-355.
3. Mant, A., et al. 2013. Acid sensitive background potassium channels K2P3.1 and K2P9.1 undergo rapid Dynamin-dependent endocytosis. Channels 7: 288-302.
4. Li, X., et al. 2017. SAMMSON drives the self-renewal of liver tumor initiating cells through EZH2-dependent Wnt/β-catenin activation. Oncotarget 8: 103785-103796.
5. Fu, X., et al. 2018. Linc00210 drives Wnt/β-catenin signaling activation and liver tumor progression through CTNNBIP1-dependent manner. Mol. Cancer 17: 73.
6. Ramasamy, K., et al. 2018. *Mycoplasma pneumoniae* community-acquired respiratory distress syndrome toxin uses a novel KELED sequence for retrograde transport and subsequent cytotoxicity. mBio 9: e01663-17.
7. Ellwanger, K., et al. 2019. XIAP controls RIPK2 signaling by preventing its deposition in speck-like structures. Life Sci. Alliance 2: e201900346.
8. Herviou, P., et al. 2020. hnRNP H/F drive RNA G-quadruplex-mediated translation linked to genomic instability and therapy resistance in glioblastoma. Nat. Commun. 11: 2661.
9. Dubový, P., et al. 2021. Toll-like receptor 9-mediated neuronal innate immune reaction is associated with initiating a pro-regenerative state in neurons of the dorsal root ganglia non-associated with sciatic nerve lesion. Int. J. Mol. Sci. 22: 7446.

CONJUGATES

See **EEA1 (G-4): sc-137130** for EEA1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.