SANTA CRUZ BIOTECHNOLOGY, INC.

EEA1 (N-19): sc-6415

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 160-180 kDa 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.

CHROMOSOMAL LOCATION

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

SOURCE

EEA1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of EEA1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6415 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EEA1 (N-19) is recommended for detection of EEA1 of mouse 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

EEA1 (N-19) is also recommended for detection of EEA1 in additional species, including porcine.

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: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or A-431 whole cell lysate: sc-2201.

RESEARCH USE

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

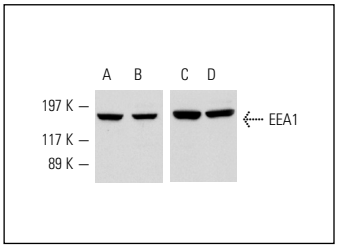
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

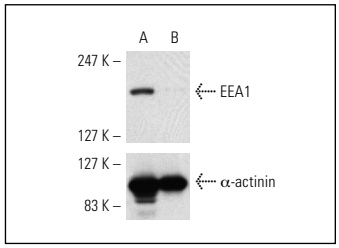
STORAGE

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

DATA



Western blot analysis of EEA1 expression in A-431 (**A**,**C**) and NIH/3T3 (**B**,**D**) whole cell lysates. Anti-bodies tested include EEA1 (C-15): sc-6414 (**A**,**B**) and EEA1 (N-19): sc-6415 (**C**,**D**).



EEA1 siRNA (h): sc-35263. Western blot analysis of EEA1 expression in non-transfected control (**A**) and EEA1 siRNA transfected (**B**) HeLa cells. Blot probed with EEA1 (N-19): sc-6415. α-actinin (H-2): sc-17829 used as specificity and loading control.

SELECT PRODUCT CITATIONS

1. Cormont, M., et al. 2001. A FYVE-finger-containing protein, Rabip4, is a Rab4 effector involved in early endosomal traffic. Proc. Natl. Acad. Sci. USA 98: 1637-1642.
2. Thiery, J., et al. 2010. Perforin activates clathrin- and dynamin-dependent endocytosis, which is required for plasma membrane repair and delivery of granzyme B for granzyme-mediated apoptosis. Blood 115: 1582-1593.
3. Tanaka, Y., et al. 2010. Liposome-coupled antigens are internalized by antigen-presenting cells via pinocytosis and cross-presented to CD8 T cells. PLoS ONE 5: e15225.
4. Bäck, N., et al. 2010. Secretory granule membrane protein recycles through multivesicular bodies. Traffic 11: 972-986.
5. Maekawa, C., et al. 2010. Expression and translocation of aquaporin-2 in the endolymphatic sac in patients with Meniere's disease. J. Neuroendocrinol. 22: 1157-1164.
6. Koumakpayi, I.H., et al. 2011. Macropinocytosis inhibitors and Arf6 regulate ErbB3 nuclear localization in prostate cancer cells. Mol. Carcinog. 50: 901-912.
7. Morey, P., et al. 2011. Evidence for a non-replicative intracellular stage of nontypable *Haemophilus influenzae* in epithelial cells. Microbiology 157: 234-250.
8. Pritz, C.O., et al. 2012. Endocytic trafficking of silica nanoparticles in a cell line derived from the organ of Corti. Nanomedicine 8: 239-252.