



EEA1 (2306C5a): sc-130017

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 Rab 5 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

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2. Mu, F.T., et al. 1995. EEA1, an early endosome-associated protein. EEA1 is a conserved alpha-helical peripheral membrane protein flanked by cysteine "fingers" and contains a calmodulin-binding IQ motif. *J. Biol. Chem.* 270: 13503-13511.
3. 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.
4. Piper, R.C., et al. 1995. Vps27 controls vacuolar and endocytic traffic through a prevacuolar compartment in *Saccharomyces cerevisiae*. *J. Cell Biol.* 131: 603-617.
5. Stenmark, H., et al. 1996. Endosomal localization of the autoantigen EEA1 is mediated by a zinc-binding FYVE finger. *J. Biol. Chem.* 271: 24048-24054.
6. Bottger, G., et al. 1996. Rab 4 and Rab 7 define distinct nonoverlapping endosomal compartments. *J. Biol. Chem.* 271: 29191-29197.
7. Patki, V., et al. 1997. Identification of an early endosomal protein regulated by phosphatidylinositol 3-kinase. *Proc. Natl. Acad. Sci. USA* 94: 7326-7330.
8. D'Arrigo, A., et al. 1997. Microtubules are involved in bafilomycin A1-induced tubulation and Rab 5-dependent vacuolation of early endosomes. *Eur. J. Cell Biol.* 72: 95-103.

CHROMOSOMAL LOCATION

Genetic locus: EEA1 (human) mapping to 12q22.

STORAGE

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

PROTOCOLS

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

SOURCE

EEA1 (2306C5a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of EEA1 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% BSA.

APPLICATIONS

EEA1 (2306C5a) is recommended for detection of EEA1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

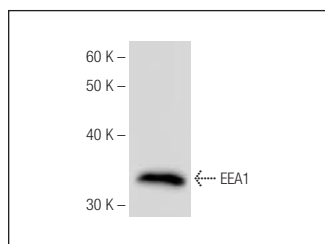
Molecular Weight of EEA1: 162 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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



EEA1 (2306C5a): sc-130017. Western blot analysis of human recombinant EEA1 fusion protein.

RESEARCH USE

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