

EEA1 (G-4): sc-137130



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.

CHROMOSOMAL LOCATION

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

SOURCE

EEA1 (G-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of EEA1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EEA1 (G-4) is available conjugated to agarose (sc-137130 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137130 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137130 PE), fluorescein (sc-137130 FITC), Alexa Fluor® 488 (sc-137130 AF488), Alexa Fluor® 546 (sc-137130 AF546), Alexa Fluor® 594 (sc-137130 AF594) or Alexa Fluor® 647 (sc-137130 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137130 AF680) or Alexa Fluor® 790 (sc-137130 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

EEA1 (G-4) is recommended for detection of EEA1 of mouse, rat, human and monkey 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), immunohistochemistry (including paraffin-embedded sections) (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 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, C6 whole cell lysate: sc-364373 or human placenta extract: sc-363772.

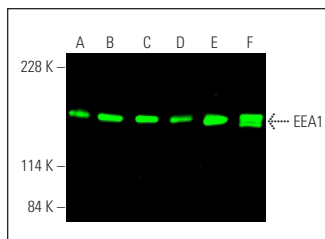
STORAGE

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

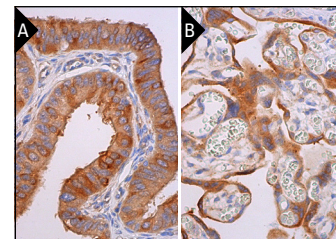
RESEARCH USE

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

DATA



EEA1 (G-4): sc-137130. Near-infrared western blot analysis of EEA1 expression in NIH/3T3 (A), HeLa (B), A-431 (C), Jurkat (D) and C6 (E) whole cell lysates and human placenta tissue extract (F). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



EEA1 (G-4): sc-137130. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells (B).

SELECT PRODUCT CITATIONS

- Brothers, M.C., et al. 2011. Membrane interaction of *Pasteurella multocida* toxin involves sphingomyelin. FEBS J. 278: 4633-4648.
- Kuszczyk, M.A., et al. 2013. Blocking the interaction between apolipoprotein E and Aβ reduces intraneuronal accumulation of Aβ and inhibits synaptic degeneration. Am. J. Pathol. 182: 1750-1768.
- Zhu, Y., et al. 2015. Activation of the NLRP3 inflammasome by vault nanoparticles expressing a chlamydial epitope. Vaccine 33: 298-306.
- Becker, A.C., et al. 2018. Influenza A virus induces autophagosomal targeting of ribosomal proteins. Mol. Cell. Proteomics 17: 1909-1921.
- Arriagada, C., et al. 2019. Focal adhesion kinase-dependent activation of the early endocytic protein Rab5 is associated with cell migration. J. Biol. Chem. 294: 12836-12845.
- Rolland, M., et al. 2020. Effect of Aβ oligomers on neuronal APP triggers a vicious cycle leading to the propagation of synaptic plasticity alterations to healthy neurons. J. Neurosci. 40: 5161-5176.
- Lin, T.H., et al. 2021. TSG101 negatively regulates mitochondrial biogenesis in axons. Proc. Natl. Acad. Sci. USA 118: e2018770118.
- Ruan, Z., et al. 2022. Functional genome-wide short hairpin RNA library screening identifies key molecules for extracellular vesicle secretion from microglia. Cell Rep. 39: 110791.
- Zhang, H., et al. 2023. EGFR-TNFR1 pathway in endothelial cell facilitates acute lung injury by NFκB/MAPK-mediated inflammation and RIP3-dependent necroptosis. Int. Immunopharmacol. 117: 109902.

PROTOCOLS

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

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