

Rabex-5 (D-8): sc-166050

BACKGROUND

Rabex-5 (Rab 5 GDP/GTP exchange factor), also known as RABGEF1, RAP1 or RABAPTIN-5-associated exchange factor for Rab 5, is a Rab guanine nucleotide exchange factor. Rabex-5 localizes to the cytoplasm and can associate with early endosomes. It consists of an N-terminal zinc finger domain, a GEF domain, an EET (early endosomal targeting) domain and a coiled-coil domain. The EET domain is important for the association of Rabex-5 with early endosomes and for the activation of Rab 5. Truncated Rabex-5 that is missing its EET domain can still function via an association with RABAPTIN-5. The Rabex-5/RABAPTIN-5 complex can target to early endosomes in a Rab 5-dependent manner through the binding of Rab5-GTP to RABAPTIN-5. *In vitro*, Rabex-5 exhibits GEF activity on its own, however, its association with RABAPTIN-5 increases its efficiency.

REFERENCES

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3. Penengo, L., et al. 2006. Crystal structure of the ubiquitin binding domains of Rabex-5 reveals two modes of interaction with ubiquitin. *Cell* 124: 1183-1195.
4. Lee, S., et al. 2006. Structural basis for ubiquitin recognition and autoubiquitination by Rabex-5. *Nat. Struct. Mol. Biol.* 13: 264-271.
5. Mattera, R., et al. 2006. The Rab5 guanine nucleotide exchange factor Rabex-5 binds ubiquitin (Ub) and functions as a Ub ligase through an atypical Ub-interacting motif and a zinc finger domain. *J. Biol. Chem.* 281: 6874-6883.
6. Zhu, H., et al. 2007. Rabaptin-5-independent membrane targeting and Rab5 activation by Rabex-5 in the cell. *Mol. Biol. Cell* 18: 4119-4128.
7. van den Hove, M.F., et al. 2007. Thyrotropin activates guanosine 5'-diphosphate/guanosine 5'-triphosphate exchange on the rate-limiting endocytic catalyst, Rab5a, in human thyrocytes *in vivo* and *in vitro*. *J. Clin. Endocrinol. Metab.* 92: 2803-2810.

CHROMOSOMAL LOCATION

Genetic locus: RABGEF1 (human) mapping to 7q11.21; Rabgef1 (mouse) mapping to 5 G1.3.

SOURCE

Rabex-5 (D-8) is a mouse monoclonal antibody raised against amino acids 421-708 mapping at the C-terminus of Rabex-5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Rabex-5 (D-8) is recommended for detection of Rabex-5 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 Rabex-5 siRNA (h): sc-62920, Rabex-5 siRNA (m): sc-62921, Rabex-5 shRNA Plasmid (h): sc-62920-SH, Rabex-5 shRNA Plasmid (m): sc-62921-SH, Rabex-5 shRNA (h) Lentiviral Particles: sc-62920-V and Rabex-5 shRNA (m) Lentiviral Particles: sc-62921-V.

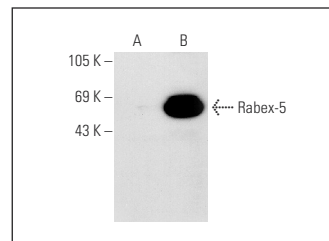
Molecular Weight of Rabex-5: 60 kDa.

Positive Controls: human brain extract: sc-364375, NIH/3T3 whole cell lysate: sc-2210 or Rabex-5 (h): 293T Lysate: sc-113412.

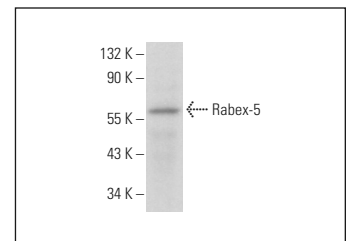
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Rabex-5 (D-8): sc-166050. Western blot analysis of Rabex-5 expression in non-transfected: sc-117752 (A) and human Rabex-5 transfected: sc-113412 (B) 293T whole cell lysates.



Rabex-5 (D-8): sc-166050. Western blot analysis of Rabex-5 expression in human brain tissue extract.

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.

PROTOCOLS

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