

Rabex-5 (C-4): sc-166049

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

1. Delprato, A., et al. 2004. Structure, exchange determinants, and family-wide Rab specificity of the tandem helical bundle and Vps9 domains of Rabex-5. *Cell* 118: 607-617.
2. Tam, S.Y., et al. 2005. RabGEF1, a negative regulator of Ras signalling, mast cell activation and skin inflammation. *Novartis Found. Symp.* 271: 115-124.

CHROMOSOMAL LOCATION

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

SOURCE

Rabex-5 (C-4) 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_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Rabex-5 (C-4) 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), 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 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.

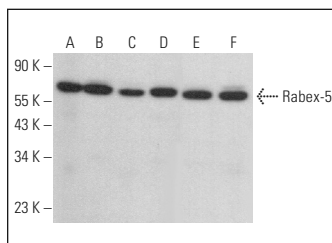
Molecular Weight of Rabex-5: 60 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, 3T3-L1 cell lysate: sc-2243 or Sol8 cell lysate: sc-2249.

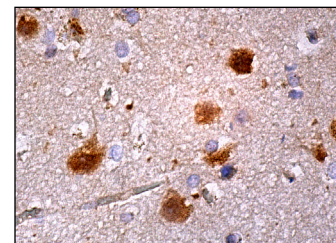
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Rabex-5 (C-4): sc-166049. Western blot analysis of Rabex-5 expression in human brain tissue extract (A) and IMR-32 (B), 3T3-L1 (C), Sol8 (D), L6 (E) and Neuro-2A (F) whole cell lysates.



Rabex-5 (C-4): sc-166049. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic and nuclear staining of neuronal cells.

SELECT PRODUCT CITATIONS

1. Wang, D., et al. 2021. Capping protein regulates endosomal trafficking by controlling F-Actin density around endocytic vesicles and recruiting RAB5 effectors. *Elife* 10: e65910.
2. Mashimo, M., et al. 2022. Poly(ADP-ribose) polymerase 1 mediates Rab5 inactivation after DNA damage. *Int. J. Mol. Sci.* 23: 7827.

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.