

# Rabex-5 (D-11): sc-166496

## 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.
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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Rabex-5 (D-11) 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<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-166496 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

Rabex-5 (D-11) 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.

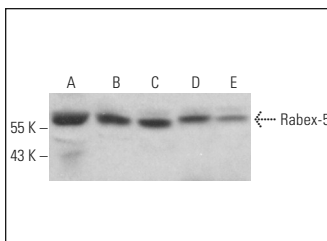
Molecular Weight of Rabex-5: 60 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, WEHI-231 whole cell lysate: sc-2213 or PC-12 cell lysate: sc-2250.

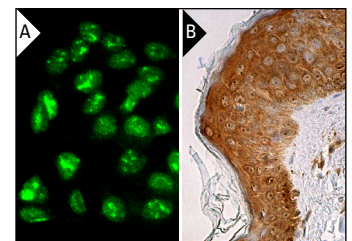
## RECOMMENDED SUPPORT REAGENTS

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 (D-11): sc-166496. Western blot analysis of Rabex-5 expression in human cerebral cortex tissue extract (A) and WEHI-231 (B), PC-12 (C), MIA PaCa-2 (D) and BC<sub>3</sub>H1 (E) whole cell lysates.



Rabex-5 (D-11): sc-166496. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nucleolar localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic and nucleolar staining of epidermal cells (B).

## SELECT PRODUCT CITATIONS

1. Stöhr, O., et al. 2011. Insulin receptor signaling mediates APP processing and β-amyloid accumulation without altering survival in a transgenic mouse model of Alzheimer's disease. *Age* 35: 83-101.

## RESEARCH USE

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