SANTA CRUZ BIOTECHNOLOGY, INC.

EPI64 (B-9): sc-376991

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Na^+/H^+ exchange protein (NHE) functions in transepithelial Na^+ absorption and is primarily expressed in the intestinal and renal brush border membrane. NHE regulatory factor 1 (NHERF-1) interacts with NHE through two PDZ (for PSD-95, discs-large, and ZO-1 homology) domains, which are protein-protein interaction modules that associate with specific C-terminal motifs on target proteins. Also known as EBP50, NHERF-1 facilitates cAMP inhibition of NHE to decrease Na^+ adsorption. NHERF-2, also known as E3KARP, is ubiquitously expressed as a protein which also functions in NHE2 regulation. EPI64 (EBP-PDZ interactor) contains a C-terminal -DTYL sequence that binds to the first PDZ domain of NHERF-1 and NHERF-2. EPI64 is ubiquitously expressed and localizes with NHERF-1 *in vitro*.

REFERENCES

1. Sheng, M. 1996. PDZs and receptor/channel clustering: rounding up the latest suspects. Neuron 17: 575-578.
2. Yun, C.H., et al. 1997. cAMP-mediated inhibition of the epithelial brush border Na^+/H^+ exchanger, NHE3, requires an associated regulatory protein. Proc. Natl. Acad. Sci. USA 94: 3010-3015.
3. Poulat, F., et al. 1997. The human testis determining factor SRY bind a nuclear factor containing PDZ protein interaction domains. J. Biol. Chem. 272: 7167-7172.
4. Reczek, D. and Bretscher, A. 2001. Identification of EPI64, a TBC/rabGAP domain-containing microvillar protein that binds to the first PDZ domain of EBP50 and E3KARP. J. Cell Biol. 153: 191-205.
5. Itoh, T. and Fukuda, M. 2006. Identification of EPI64 as a GTPase-activating protein specific for Rab27A. J. Biol. Chem. 281: 31823-31831.
6. Hanono, A., et al. 2006. EPI64 regulates microvillar subdomains and structure. J. Cell Biol. 175: 803-813.

CHROMOSOMAL LOCATION

Genetic locus: TBC1D10A (human) mapping to 22q12.2; Tbc1d10a (mouse) mapping to 11 A1.

SOURCE

EPI64 (B-9) is a mouse monoclonal antibody raised against amino acids 381-500 mapping at the C-terminus of EPI64 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EPI64 (B-9) is available conjugated to agarose (sc-376991 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376991 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376991 PE), fluorescein (sc-376991 FITC), Alexa Fluor® 488 (sc-376991 AF488), Alexa Fluor® 546 (sc-376991 AF546), Alexa Fluor® 594 (sc-376991 AF594) or Alexa Fluor® 647 (sc-376991 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376991 AF680) or Alexa Fluor® 790 (sc-376991 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

EPI64 (B-9) is recommended for detection of EPI64 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 EPI64 siRNA (h): sc-42520, EPI64 siRNA (m): sc-42521, EPI64 shRNA Plasmid (h): sc-42520-SH, EPI64 shRNA Plasmid (m): sc-42521-SH, EPI64 shRNA (h) Lentiviral Particles: sc-42520-V and EPI64 shRNA (m) Lentiviral Particles: sc-42521-V.

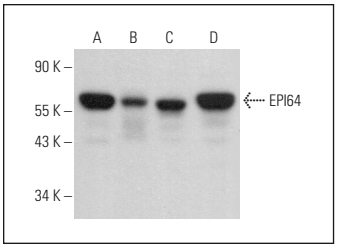
Molecular Weight of EPI64: 64 kDa.

Positive Controls: C3H/10T1/2 cell lysate: sc-3801, EPI64 (m2): 293T Lysate: sc-125304 or 3T3-L1 cell lysate: sc-2243.

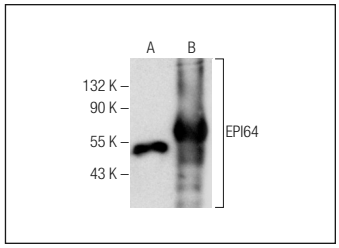
RECOMMENDED SUPPORT REAGENTS

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



EPI64 (B-9): sc-376991. Western blot analysis of EPI64 expression in 3T3-L1 (**A**), C3H/10T1/2 (**B**), Neuro-2A (**C**) and CCRF-CEM (**D**) whole cell lysates.



EPI64 (B-9): sc-376991. Western blot analysis of EPI64 expression in non-transfected: sc-117752 (**A**) and mouse EPI64 transfected: sc-125304 (**B**) 293T whole cell lysates.

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.