SANTA CRUZ BIOTECHNOLOGY, INC.

EPI64 (C-20): sc-18282

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 34 kDa protein which also functions in NHE2 regulation. EBP-PDZ interactor of 64 kDa (EPI64) 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*. The gene encoding human EPI64 maps to chromosome 22q12.1-qter.

REFERENCES

1. Sheng, M. 1996. PDZs and receptor/channel clustering: rounding up the latest suspects. Neuron 17: 575-578.
2. Yun, C.H., Oh, S., Zizak, M., Steplock, D., Tsao, S., Tse, C.M., Weinman, E.J. and Donowitz, M. 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., de Santa Barbara, P., Desclozeaux, M., Soullier, S., Moniot, B., Bonneaud, N., Boizet, B. and Berta, P. 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., Garbett, D., Reczek, D., Chambers, D.N. and Bretscher, A. 2006. EPI64 regulates microvillar subdomains and structure. J. Cell Biol.175: 803-813.

SOURCE

EPI64 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of EPI64 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18282 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

EPI64 (C-20) is recommended for detection of EPI64 of human and, to a lesser extent, m and r origin by Western Blotting (starting dilution 1:200, 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).

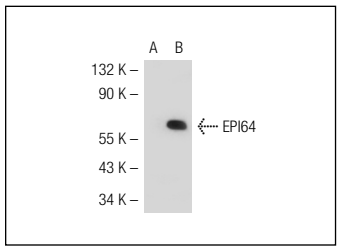
EPI64 (C-20) is also recommended for detection of EPI64 in additional species, including porcine.

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.

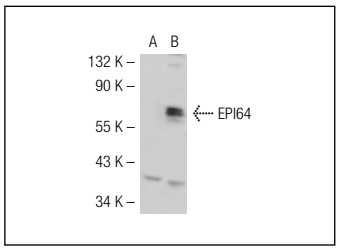
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



EPI64 (C-20): sc-18282. Western blot analysis of EPI64 expression in non-transfected: sc-117752 (**A**) and human EPI64 transfected: sc-112711 (**B**) 293T whole cell lysates.



EPI64 (C-20): sc-18282. Western blot analysis of EPI64 expression in non-transfected: sc-117752 (**A**) and mouse EPI64 transfected: sc-125304 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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