

band 3 (L-22): sc-130970

BACKGROUND

Band 3, also designated AE1, is an erythrocyte membrane glycoprotein that contributes to cell structural integrity and mediates exchange of chloride and bicarbonate across the phospholipid bilayer. The diverse functions of the approximately 900 amino acid protein are mediated by 2 distinct domains. The amino-terminal domain, also known as cdb3 for cytoplasmic domain of erythrocyte membrane band 3, acts as an attachment site for the erythrocyte skeleton by binding ankyrin. The carboxy-terminal, membrane-associated domain carries out exchange transport of anions. Degradation of band 3 can generate an aging antigen known as senescent cell antigen, or SCA, which is expressed on old cells and marks them for removal by the immune system. An isoform of band 3, which lacks the first 65 amino acids and does not bind ankyrin, is expressed in kidney.

REFERENCES

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3. Jay, D.G. 1996. Role of band 3 in homeostasis and cell shape. *Cell* 86: 853-854.
4. Motais, R., et al. 1997. Association of the band 3 protein with a volume-activated, anion and amino acid channel: a molecular approach. *J. Exp. Biol.* 200: 361-367.
5. Tanner, M.J. 1997. The structure and function of band 3 (AE1): recent developments (review). *Mol. Membr. Biol.* 14: 155-165.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 109270. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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CHROMOSOMAL LOCATION

Genetic locus: SLC4A1 (human) mapping to 17q21.31.

SOURCE

band 3 (L-22) is an affinity purified rabbit polyclonal antibody raised against synthetic band 3 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

band 3 (L-22) is recommended for detection of band 3 of human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for band 3 siRNA (h): sc-42735, band 3 shRNA Plasmid (h): sc-42735-SH and band 3 shRNA (h) Lentiviral Particles: sc-42735-V.

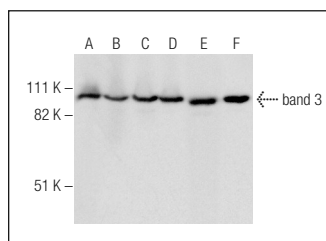
Molecular Weight of band 3: 95 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, HeLa whole cell lysate: sc-2200 or human liver extract: sc-363766.

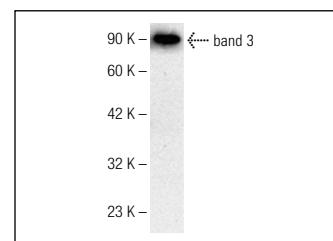
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



band 3 (L-22): sc-130970. Western blot analysis of band 3 expression in HeLa (A), Caki-1 (B), HEL 92.1.7 (C), K-562 (D) and Hep G2 (E) whole cell lysates and human liver tissue extract (F).



band 3 (L-22): sc-130970. Western blot analysis of band 3 expression in human fetal liver tissue extract.

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.

MONOS
Satisfaction
Guaranteed

Try **band 3 (A-6): sc-133190** or **band 3 (BIII 136): sc-58695**, our highly recommended monoclonal alternatives to band 3 (L-22).