

band 3 (N-20): sc-20557

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.

CHROMOSOMAL LOCATION

Genetic locus: SLC4A1 (human) mapping to 17q21.31; Slc4a1 (mouse) mapping to 11 D.

SOURCE

band 3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of band 3 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-20557 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

band 3 (N-20) is recommended for detection of band 3 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

band 3 (N-20) is also recommended for detection of band 3 in additional species, including equine and canine.

Suitable for use as control antibody for band 3 siRNA (h): sc-42735, band 3 siRNA (m): sc-42736, band 3 shRNA Plasmid (h): sc-42735-SH, band 3 shRNA Plasmid (m): sc-42736-SH, band 3 shRNA (h) Lentiviral Particles: sc-42735-V and band 3 shRNA (m) Lentiviral Particles: sc-42736-V.

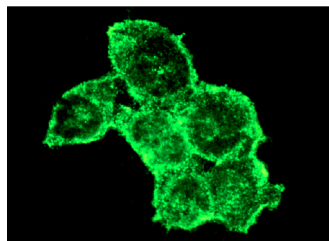
Molecular Weight of band 3: 95 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Caki-1 cell lysate: sc-2224.

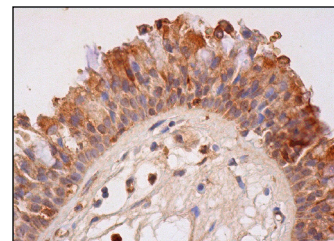
RECOMMENDED SECONDARY REAGENTS

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



band 3 (N-20): sc-20557. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.



band 3 (N-20): sc-20557. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing cytoplasmic and nuclear staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

- Hengl, T., et al. 2010. Molecular components of signal amplification in olfactory sensory cilia. *Proc. Natl. Acad. Sci. USA* 107: 6052-6057.

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 (N-20).