

# SLC4A8 (H-48): sc-292031

## BACKGROUND

SLC4A8 (solute carrier family 4, sodium bicarbonate cotransporter, member 8), also known as NBC3, kNBC3 or NDCBE (Na<sup>+</sup>-driven chloride bicarbonate exchanger), is a member of the anion exchanger family and is predominantly expressed in brain and spinal column with moderate expression in thyroid, kidney and trachea. In the brain, SLC4A8 is found at high levels in the pyramidal cells of the hippocampus and the Purkinje cells of the cerebellum. Localizing to the membrane, SLC4A8 is an N-glycosylated, multi-pass membrane protein that plays an important role in intracellular pH regulation in neurons. More specifically, SLC4A8 functions as an electroneutral transporter and mediates the transport of bicarbonate and sodium ions across the membrane from the blood to the cell in exchange for cellular chloride. SLC4A8 is most closely related to NCBE and SLC4A7. Due to alternative splicing events, seven isoforms exist for SLC4A8.

## REFERENCES

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2. Amlal, H., et al. 1999. Characterization of Na<sup>+</sup>/HCO<sub>3</sub><sup>-</sup> cotransporter isoform NBC3. Am. J. Physiol. 276: F903-F913.
3. Soleimani, M. and Burnham, C.E. 2000. Physiologic and molecular aspects of the Na<sup>+</sup>/HCO<sub>3</sub><sup>-</sup> cotransporter in health and disease processes. Kidney Int. 57: 371-384.
4. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605024. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Aalkjaer, C., et al. 2004. Sodium coupled bicarbonate transporters in the kidney, an update. Acta Physiol. Scand. 181: 505-512.
6. Damkier, H.H., et al. 2007. Molecular expression of SLC4-derived Na<sup>+</sup>-dependent anion transporters in selected human tissues. Am. J. Physiol. Regul. Integr. Comp. Physiol. 293: R2136-R2146.

## CHROMOSOMAL LOCATION

Genetic locus: SLC4A8 (human) mapping to 12q13.13; Slc4a8 (mouse) mapping to 15 F1.

## SOURCE

SLC4A8 (H-48) is a rabbit polyclonal antibody raised against amino acids 47-94 mapping within an N-terminal extracellular domain of SLC4A8 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.

## STORAGE

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

## APPLICATIONS

SLC4A8 (H-48) is recommended for detection of SLC4A8 of mouse, rat and 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)], 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).

SLC4A8 (H-48) is also recommended for detection of SLC4A8 in additional species, including equine and bovine.

Suitable for use as control antibody for SLC4A8 siRNA (h): sc-95907, SLC4A8 siRNA (m): sc-153570, SLC4A8 shRNA Plasmid (h): sc-95907-SH, SLC4A8 shRNA Plasmid (m): sc-153570-SH, SLC4A8 shRNA (h) Lentiviral Particles: sc-95907-V and SLC4A8 shRNA (m) Lentiviral Particles: sc-153570-V.

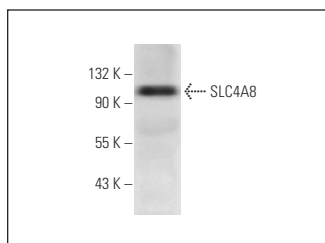
Molecular Weight of SLC4A8: 123 kDa.

Positive Controls: human salivary gland extract: sc-363762.

## 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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## DATA



SLC4A8 (H-48): sc-292031. Western blot analysis of SLC4A8 expression in human salivary gland tissue extract.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.