

# SLC4A1AP (F-15): sc-169342

## BACKGROUND

Solute carrier family 4 anion exchanger member 1 adapter protein (SLC4A1AP), also designated Kanadaplin or human lung cancer oncogene 3 protein (HLC-3), is a 796 amino acid protein that is widely expressed in many tissues, including kidney, lung, liver, brain and skeletal and cardiac muscle. SLC4A1AP is a multidomain protein that localizes to the nucleus where it may play a role in signaling. SLC4A1AP was previously thought to act as an adaptor protein or chaperone involved in targeting kAE1 to the plasma membrane. However, recent studies suggest SLC4A1AP does not interact with kAE1. The gene encoding SLC4A1AP maps to chromosome 2, which consists of 237 million bases and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2, including Harlequin ichthyosis, sitosterolemia and Alström syndrome.

## REFERENCES

- Chen, J., et al. 1998. Kanadaplin is a protein that interacts with the kidney but not the erythroid form of band 3. *J. Biol. Chem.* 273: 1038-1043.
- Hübner, S., et al. 2002. Signal- and importin-dependent nuclear targeting of the kidney anion exchanger 1-binding protein kanadaplin. *Biochem. J.* 361: 287-296.
- Hübner, S., et al. 2003. Mitochondrial and nuclear localization of kanadaplin. *Eur. J. Cell Biol.* 82: 240-252.
- Kittanakom, S., et al. 2004. Human kanadaplin and kidney anion exchanger 1 (kAE1) do not interact in transfected HEK 293 cells. *Mol. Membr. Biol.* 21: 395-402.
- Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. *Nature* 434: 724-731.
- Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. *J. Invest. Dermatol.* 126: 2408-2413.
- Marshall, J.D., et al. 2007. Alström syndrome. *Eur. J. Hum. Genet.* 15: 1193-1202.
- Marshall, J.D., et al. 2007. Spectrum of ALMS1 variants and evaluation of genotype-phenotype correlations in Alström syndrome. *Hum. Mutat.* 28: 1114-1123.

## CHROMOSOMAL LOCATION

Genetic locus: SLC4A1AP (human) mapping to 2p23.3; Slc4a1ap (mouse) mapping to 5 B1.

## SOURCE

SLC4A1AP (F-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SLC4A1AP 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-169342 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SLC4A1AP (F-15) is recommended for detection of SLC4A1AP of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SLC4A1AP (F-15) is also recommended for detection of SLC4A1AP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SLC4A1AP siRNA (h): sc-94489, SLC4A1AP siRNA (m): sc-153567, SLC4A1AP shRNA Plasmid (h): sc-94489-SH, SLC4A1AP shRNA Plasmid (m): sc-153567-SH, SLC4A1AP shRNA (h) Lentiviral Particles: sc-94489-V and SLC4A1AP shRNA (m) Lentiviral Particles: sc-153567-V.

Molecular Weight of SLC4A1AP: 90 kDa.

Positive Controls: rat kidney extract: sc-2394.

## 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.

## 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.

## PROTOCOLS

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