

# SLC5A12 (P-14): sc-162220

## BACKGROUND

SLC5A12 (solute carrier family 5 (sodium/glucose cotransporter), member 12), also known as SMCT2, is a 618 amino acid multi-pass membrane protein that belongs to the sodium:solute symporter (SSF) family. Considered an electroneutral and low-affinity sodium (Na<sup>+</sup>)-dependent sodium-coupled solute transporter, SLC5A12 mediates the transport of a variety of monocarboxylates, including short-chain fatty acids, lactate, nicotinate and pyruvate. SLC5A12 is thought to participate in the initial step of reabsorption of monocarboxylates from the lumen of the proximal tubule of kidney and small intestine. It is also suggested that SLC5A12 plays a role in the transport of monocarboxylates in retina and is strongly inhibited by ibuprofen, fenoprofen and ketoprofen. SLC5A12 exists as two alternatively spliced isoforms and is encoded by a gene located on human chromosome 11p14.2.

## REFERENCES

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3. Gopal, E., et al. 2007. Cloning and functional characterization of human SMCT2 (SLC5A12) and expression pattern of the transporter in kidney. *Biochim. Biophys. Acta* 1768: 2690-2697.
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## CHROMOSOMAL LOCATION

Genetic locus: SLC5A12 (human) mapping to 11p14.2; Slc5a12 (mouse) mapping to 2 E3.

## SOURCE

SLC5A12 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of SLC5A12 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-162220 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SLC5A12 (P-14) is recommended for detection of SLC5A12 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); non cross-reactive with SLC5A8.

SLC5A12 (P-14) is also recommended for detection of SLC5A12 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SLC5A12 siRNA (h): sc-96515, SLC5A12 siRNA (m): sc-153572, SLC5A12 shRNA Plasmid (h): sc-96515-SH, SLC5A12 shRNA Plasmid (m): sc-153572-SH, SLC5A12 shRNA (h) Lentiviral Particles: sc-96515-V and SLC5A12 shRNA (m) Lentiviral Particles: sc-153572-V.

Molecular Weight of SLC5A12: 68 kDa.

## 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.