

SLC5A12 (H-4): sc-515141

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⁺)-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

1. Srinivas, S.R., et al. 2005. Cloning and functional identification of SLC5A12 as a sodium-coupled low-affinity transporter for monocarboxylates (SMCT2). *Biochem. J.* 392: 655-664.
2. Thangaraju, M., et al. 2006. *c/ebpδ* Null mouse as a model for the double knock-out of SLC5A8 and SLC5A12 in kidney. *J. Biol. Chem.* 281: 26769-26773.
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.
4. Coady, M.J., et al. 2007. Establishing a definitive stoichiometry for the Na⁺/monocarboxylate cotransporter SMCT1. *Biophys. J.* 93: 2325-2331.
5. Anzai, N., et al. 2007. New insights into renal transport of urate. *Curr. Opin. Rheumatol.* 19: 151-157.

CHROMOSOMAL LOCATION

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

SOURCE

SLC5A12 (H-4) is a mouse monoclonal antibody raised against amino acids 183-237 mapping within an internal region of SLC5A12 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SLC5A12 (H-4) is available conjugated to agarose (sc-515141 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515141 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515141 PE), fluorescein (sc-515141 FITC), Alexa Fluor® 488 (sc-515141 AF488), Alexa Fluor® 546 (sc-515141 AF546), Alexa Fluor® 594 (sc-515141 AF594) or Alexa Fluor® 647 (sc-515141 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515141 AF680) or Alexa Fluor® 790 (sc-515141 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

SLC5A12 (H-4) is recommended for detection of SLC5A12 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

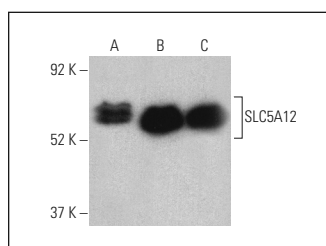
Molecular Weight of SLC5A12: 68 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, Caki-1 cell lysate: sc-2224 or F9 cell lysate: sc-2245.

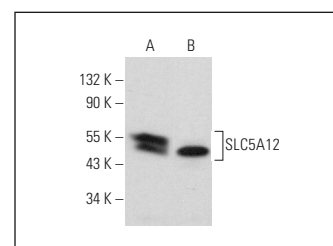
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SLC5A12 (H-4): sc-515141 HRP. Direct western blot analysis of SLC5A12 expression in Caki-1 (A), KNRK (B) and F9 (C) whole cell lysates.



SLC5A12 (H-4): sc-515141. Western blot analysis of SLC5A12 expression in Caki-1 (A) and F9 (B) whole cell lysates.

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 for detailed protocols and support products.