



## SLC22A12 (M-14): sc-162199

### BACKGROUND

SLC22A12 (solute carrier family 22 (organic anion/urate transporter), member 12), also known as RST, OAT4L or URAT1 (urate transporter-1), is a 553 amino acid multi-pass membrane protein belonging to the major facilitator super-family and the organic cation transporter family. Expressed in epithelial cells of proximal tubules in renal cortex, SLC22A12 is required for efficient urate re-absorption in the kidney, thereby regulating blood urate levels and mediating saturable urate uptake by facilitating the exchange of urate against organic anions. Defects in the SLC22A12 gene leads to renal hypouricemia (RH), an inherited disorder characterized by impaired tubular uric acid transport. Individuals affected with RH have low serum urate levels due to defects in renal urate re-absorption and high urinary urate excretion. SLC22A12 has three consensus sequences for N-glycosylation and two cyclic AMP-dependent protein kinase phosphorylation sites.

### REFERENCES

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2. Hamada, T., et al. 2008. Uricosuric action of losartan via the inhibition of urate transporter 1 (URAT 1) in hypertensive patients. *Am. J. Hypertens.* 21: 1157-1162.
3. Jang, W.C., et al. 2008. T6092C polymorphism of SLC22A12 gene is associated with serum uric acid concentrations in Korean male subjects. *Clin. Chim. Acta.* 398: 140-144.
4. Lam, C.W., et al. 2008. A novel mutation of SLC22A12 gene causing primary renal hypouricemia in a patient with metabolic syndrome. *Clin. Chim. Acta* 398: 157-158.
5. Ichida, K., et al. 2008. Age and origin of the G774A mutation in SLC22A12 causing renal hypouricemia in Japanese. *Clin. Genet.* 74: 243-251.
6. Lee, J.H., et al. 2008. Prevalence of hypouricaemia and SLC22A12 mutations in healthy Korean subjects. *Nephrology* 13: 661-666.
7. Endou, H., et al. 2008. Urate transport across the apical membrane of renal proximal tubules. *Nucleosides Nucleotides Nucleic Acids* 27: 578-584.
8. Tu, H.P., et al. 2009. SLC22A12 Gene is Associated with Gout in Han Chinese and Solomon Islanders. *Ann. Rheum. Dis.* E-published.
9. Guan, M., et al. 2009. High-resolution melting analysis for the rapid detection of an intronic single nucleotide polymorphism in SLC22A12 in male patients with primary gout in China. *Scand. J. Rheumatol.* 38: 276-281.

### CHROMOSOMAL LOCATION

Genetic locus: Slc22a12 (mouse) mapping to 19 A.

### 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.

### SOURCE

SLC22A12 (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SLC22A12 of mouse 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-162199 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

SLC22A12 (M-14) is recommended for detection of SLC22A12 of mouse 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 other SLC22A family members.

Suitable for use as control antibody for SLC22A12 siRNA (m): sc-153497, SLC22A12 shRNA Plasmid (m): sc-153497-SH and SLC22A12 shRNA (m) Lentiviral Particles: sc-153497-V.

### 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.

### PROTOCOLS

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