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SLC12A1 Rabbit pAb

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Catalog # AP57665

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q13621
Predicted	Human, Mouse, Rat, Chicken, Dog, Pig, Horse, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	121450
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SLC12A1
Epitope Specificity	951-1050/1099
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Membrane.
SIMILARITY	Belongs to the SLC12A transporter family.
DISEASE	Defects in SLC12A1 are the cause of Bartter syndrome type 1 (BS1) [MIM:601678]. BS refers to a group of autosomal recessive disorders characterized by impaired salt reabsorption in the thick ascending loop of Henle with pronounced salt wasting, hypokalemic metabolic alkalosis, and varying degrees of hypercalciuria. BS1 is a life-threatening condition beginning in utero, with marked fetal polyuria that leads to polyhydramnios and premature delivery. Another hallmark of BS1 is a marked hypercalciuria and, as a secondary consequence, the development of nephrocalcinosis and osteopenia.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a kidney-specific sodium-potassium-chloride cotransporter that is expressed on the luminal membrane of renal epithelial cells of the thick ascending limb of Henle's loop and the macula densa. It plays a key role in concentrating urine and accounts for most of the NaCl resorption. It is sensitive to such diuretics as furosemide and bumetanide. Some Bartter-like syndromes result from defects in this gene. Alternative splicing results in multiple transcript variants encoding distinct isoforms. Additional splice variants have been described but their biological validity in humans has not been experimentally proven.[provided by RefSeq, May 2010].

Additional Information

Gene ID	6557
Other Names	Solute carrier family 12 member 1, Bumetanide-sensitive sodium-(potassium)-chloride cotransporter 1, BSC1, Kidney-specific Na-K-Cl

	symporter, Na-K-2Cl cotransporter 2, NKCC2, SLC12A1, NKCC2 {ECO:0000303|PubMed:8640224}
Target/Specificity	Kidney specific.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	SLC12A1 (HGNC:10910)
Function	Renal sodium, potassium and chloride non-electrogenic ion symporter that mediates the transepithelial NaCl reabsorption in the thick ascending limb and plays an essential role in the urinary concentration and volume regulation (PubMed:21321328). It can substitute NH4(+) for K(+), enabling NH4(+) apical transmembrane transport in the medullary thick ascending limb (MTAL). This function is crucial for maintaining ammonium homeostasis by the kidney, particularly during metabolic acidosis (By similarity).
Cellular Location	Apical cell membrane; Multi-pass membrane protein
Tissue Location	Kidney; localizes to the thick ascending limbs (at protein level).

Background

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