

#38436 Store at -20°C

NKCC2 Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R	Endogenous	150-290	Rabbit	#Q13621	6557

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Immunoprecipitation

1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

NKCC2 Antibody recognizes endogenous levels of total NKCC2 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Phe73 of human NKCC2 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The Na-K-2Cl cotransporter (NKCC2) is a sodium-potassium-chloride cotransporter. It is mainly expressed on the luminal membrane of renal epithelial cells of the thick ascending limb of Henle's loop (TALH) and mediates the majority of NaCl resorption and concentration of urine (1,2). NKCC2 is the target for several diuretic drugs, such as bumetanide, and is involved in the pathogenesis of hypertension (3,4). Mutations in the NKCC2-encoding gene, *SLC12A1*, causes Bartter's syndrome, which is featured by impaired salt reabsorption in the TALH, hypokalemic metabolic alkalosis, and hypercalciuria (5,6). Recently, NKCC2 was reported to be expressed in the brain hypothalamo-neurohypophyseal system (HNS) and upregulated upon osmotic stress (7).

Background References

1. Igarashi, P. et al. (1996) *J Biol Chem* 271, 9666-74.
2. Kaplan, M.R. et al. (1996) *J Clin Invest* 98, 723-30.
3. Markadieu, N. and Delpire, E. (2014) *Pflugers Arch* 466, 91-105.
4. Orlov, S.N. et al. (2015) *Genes Dis* 2, 186-196.
5. Vargas-Poussou, R. et al. (1998) *Am J Hum Genet* 62, 1332-40.
6. Simon, D.B. et al. (1996) *Nat Genet* 13, 183-8.
7. Konopacka, A. et al. (2015) *J Neurosci* 35, 5144-55.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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