

NKCC2 Antibody



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

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

Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in

any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.