NKCC2 Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	NKCC2, Blocking Peptide
Full Product Name	NKCC2 Blocking Peptide
Product Gene Name	NKCC2 blocking peptide
Product Synonym Gene Name	SLC12A1
Product Synonym Names	BSC1; Bumetanide sensitive sodium 3; Bumetanide-sensitive sodium-(potassium)-chloride cotransporter 2; Kidney specific Na K Cl symporter; Kidney-specific Na-K-Cl symporter; MGC48843; Na K 2Cl cotransporter; NKCC2; potassiumchloride cotransporter 2; S12A1_HUMAN; Slc12a1; sodium potassium chloride cotransporter 2; solute carrier family 12 (sodium/potassium/chloride transporters); Solute carrier family 12 member 1
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	NKCC2 peptide (MBS9621376) is used for blocking the activity of NKCC2 antibody (MBS9611423)
Molecular Weight	– Da
OMIM	gene 601678
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for NKCC2 blocking peptide	Blocking/Control
Related Product Information for NKCC2 blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of NKCC2 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for NKCC2 purchase	MBS9621376 is a blocking peptide targeting NKCC2.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NKCC2. It may not necessarily be applicable to this product.

NCBI GI #	212276464
NCBI GeneID	6557
NCBI Accession #	Q13621.2

UniProt Primary Accession #	Q13621
UniProt Secondary Accession #	A8JYA2; E9PDW4
UniProt Related Accession #	Q13621
NCBI Official Full Name	Solute carrier family 12 member 1
NCBI Official Synonym Full Names	solute carrier family 12 (sodium/potassium/chloride transporter), member 1
NCBI Official Symbol	SLC12A1
NCBI Official Synonym Symbols	BSC1; NKCC2
UniProt Protein Name	Solute carrier family 12 member 1
UniProt Synonym Protein Names	Bumetanide-sensitive sodium-(potassium)-chloride cotransporter 2; Kidney-specific Na-K-Cl symporter
UniProt Gene Name	SLC12A1
UniProt Synonym Gene Names	NKCC2
UniProt Entry Name	S12A1_HUMAN
NCBI Protein Information	solute carrier family 12 member 1; NKCC2A variant A; Na-K-2Cl cotransporter; kidney-specific Na-K-Cl symporter; bumetanide-sensitive sodium-(potassium)-chloride cotransporter 2; solute carrier family 12 (sodium/potassium/chloride transporters), member 1
NCBI Summary for NKCC2	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]
UniProt Comments for NKCC2	NKCC2: Electrically silent transporter system. Mediates sodium and chloride reabsorption. Plays a vital role in the regulation of ionic balance and cell volume. Kidney specific. Activated by WNK3. Belongs to the SLC12A transporter family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Transporter; Transporter, SLC family; Membrane protein, integral; Membrane protein, multi-pass Chromosomal Location of Human Ortholog: 15q15-q21.1 Cellular Component: membrane; apical plasma membrane; plasma membrane; integral to membrane Molecular Function: sodium:potassium:chloride symporter activity Biological Process: transport; sodium ion transport; ion transport; chloride transport; excretion; kidney development; transmembrane transport; potassium ion transport; chemical homeostasis Disease: Bartter Syndrome, Antenatal, Type 1
Research Articles on NKCC2	**1.** overexpression of mammalian plasma-membrane Na+-K+-2Cl- co-transporter NKCC2 in yeast cells complements the phenotypes resulting from the deletion of the VHC1 gene.
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