10320 Camino Santa Fe, Suite G
San Diego, CA 92121
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Anti-NKCC1/SLC12A2 Antibody Picoband™ (monoclonal, 6G7D2)

Catalog # ABO16591

Specification

Anti-NKCC1/SLC12A2 Antibody Picoband™ (monoclonal, 6G7D2) - Product Information

Application	**WB, IHC, IF**
Primary Accession	P55011
Host	**Mouse**
Isotype	**Mouse IgG2a**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-NKCC1/SLC12A2 Antibody Picoband™ (monoclonal, 6G7D2) . Tested in IF, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.

Reconstitution
Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Anti-NKCC1/SLC12A2 Antibody Picoband™ (monoclonal, 6G7D2) - Additional Information

Gene ID 6558

Other Names
Solute carrier family 12 member 2, Basolateral Na-K-Cl symporter, Bumetanide-sensitive sodium-(potassium)-chloride cotransporter 2, SLC12A2

Calculated MW
200 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human
 Immunohistochemistry(Paraffin-embedded Section), 2-5 µg/ml, Human, Mouse, Rat
 Immunofluorescence, 5 µg/ml, Human, Mouse, Rat

Contents
Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.

Immunogen
E.coli-derived human NKCC1/SLC12A2 recombinant protein (Position: K889-K943).

Purification
Immunogen affinity purified.

Storage	**At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.**

Anti-NKCC1/SLC12A2 Antibody Picoband™ (monoclonal, 6G7D2) - Protein Information

Name SLC12A2

Function
Cation-chloride cotransporter which mediates the electroneutral transport of chloride, potassium and/or sodium ions across the membrane (PubMed:16669787, PubMed:32081947, PubMed:32294086, PubMed:33597714, PubMed:35585053, PubMed:36239040, PubMed:36306358, PubMed:7629105). Plays a vital role in the regulation of ionic balance and cell volume (PubMed:16669787, PubMed:32081947, PubMed:32294086, PubMed:7629105).

Cellular Location
Basolateral cell membrane; Multi-pass membrane protein

Tissue Location
Expressed in many tissues.

Anti-NKCC1/SLC12A2 Antibody Picoband™ (monoclonal, 6G7D2) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-NKCC1/SLC12A2 Antibody Picoband™ (monoclonal, 6G7D2) - Images

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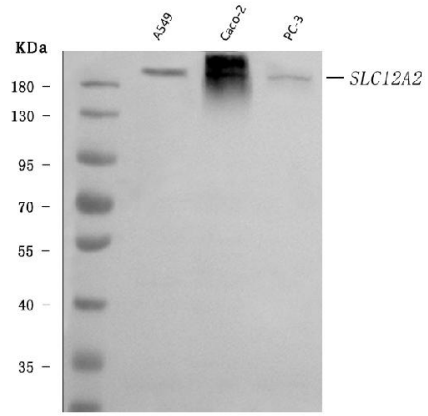

Figure 1. Western blot analysis of NKCC1/SLC12A2 using anti-NKCC1/SLC12A2 antibody (M03603).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human A549 whole cell lysates,
Lane 2: human CACO-2 whole cell lysates,
Lane 3: human PC-3 whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-NKCC1/SLC12A2 antigen affinity purified monoclonal antibody (Catalog # M03603) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for NKCC1/SLC12A2 at approximately 200 kDa. The expected band size for NKCC1/SLC12A2 is at 131 kDa.

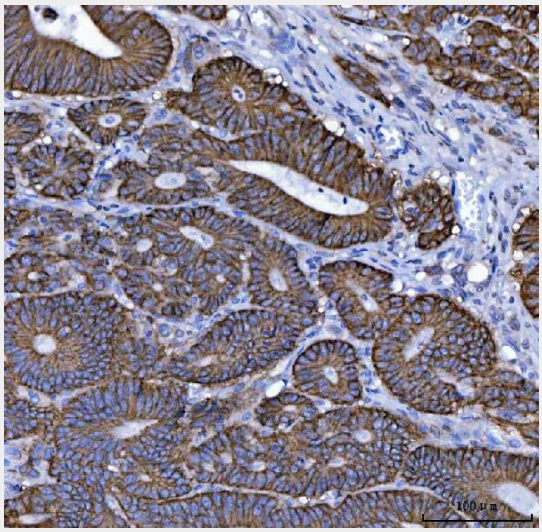

Figure 2. IHC analysis of NKCC1/SLC12A2 using anti-NKCC1/SLC12A2 antibody (M03603).
NKCC1/SLC12A2 was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue

section was then incubated with 2 µg/ml mouse anti-NKCC1/SLC12A2 Antibody (M03603) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

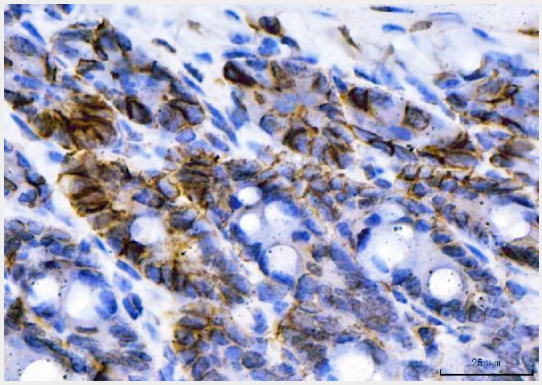

Figure 3. IHC analysis of NKCC1/SLC12A2 using anti-NKCC1/SLC12A2 antibody (M03603). NKCC1/SLC12A2 was detected in a paraffin-embedded section of mouse colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-NKCC1/SLC12A2 Antibody (M03603) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

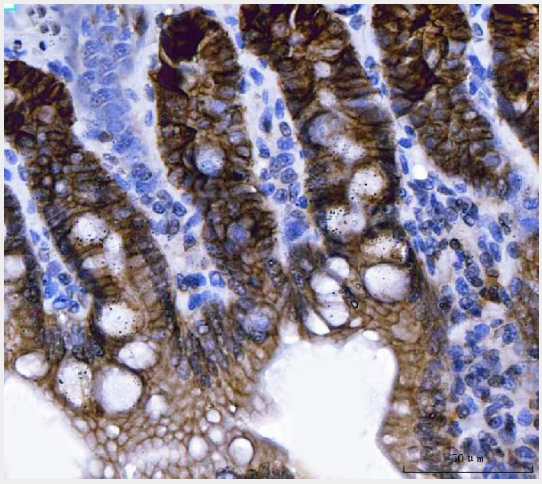

Figure 4. IHC analysis of NKCC1/SLC12A2 using anti-NKCC1/SLC12A2 antibody (M03603). NKCC1/SLC12A2 was detected in a paraffin-embedded section of rat colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-NKCC1/SLC12A2 Antibody (M03603) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

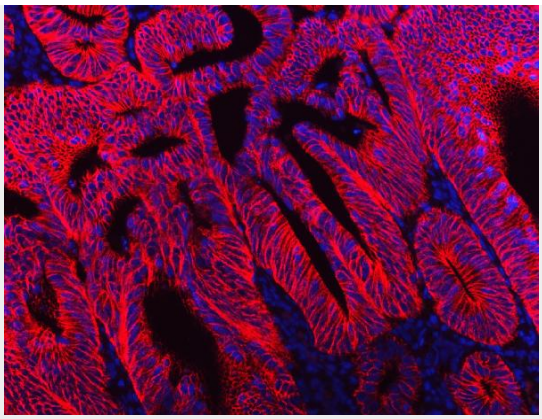

Figure 5. IF analysis of NKCC1/SLC12A2 using anti-NKCC1/SLC12A2 antibody (M03603). NKCC1/SLC12A2 was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 µg/mL mouse anti-NKCC1/SLC12A2 Antibody (M03603) overnight at 4°C. Biotin conjugated goat anti-mouse IgG (BA1001) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using DyLight®550 Conjugated Avidin (BA1134). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

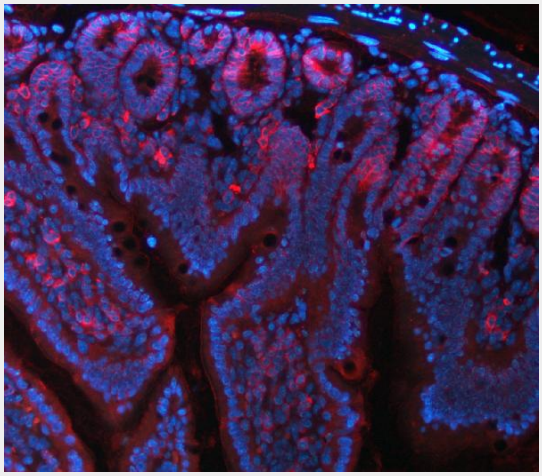

Figure 6. IF analysis of NKCC1/SLC12A2 using anti-NKCC1/SLC12A2 antibody (M03603). NKCC1/SLC12A2 was detected in a paraffin-embedded section of mouse colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 µg/mL mouse anti-NKCC1/SLC12A2 Antibody (M03603) overnight at 4°C. Biotin conjugated goat anti-mouse IgG (BA1001) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using DyLight®550 Conjugated Avidin (BA1134). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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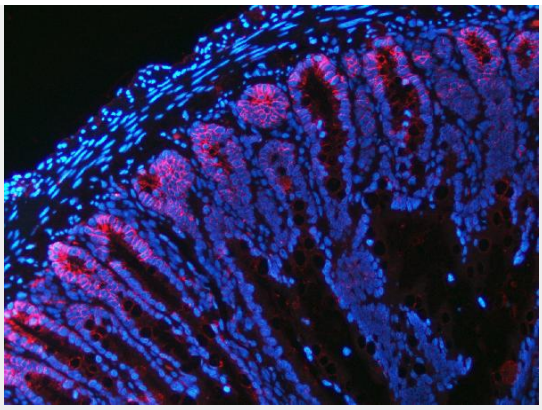

Figure 7. IF analysis of NKCC1/SLC12A2 using anti-NKCC1/SLC12A2 antibody (M03603). NKCC1/SLC12A2 was detected in a paraffin-embedded section of rat colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 µg/mL mouse anti-NKCC1/SLC12A2 Antibody (M03603) overnight at 4°C. Biotin conjugated goat anti-mouse IgG (BA1001) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using DyLight®550 Conjugated Avidin (BA1134). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Anti-NKCC1/SLC12A2 Antibody Picoband™ (monoclonal, 6G7D2) - Background

Solute carrier family 12(sodium/potassium/chloride transporters), member 2, also known as NKCC1, is widely distributed throughout the body, especially in organs that secrete fluids, called exocrine glands. By fluorescence in situ hybridization, this gene is mapped to chromosome 5q23.3. The protein encoded by this gene mediates sodium and chloride transport and reabsorption. The encoded protein is a membrane protein and is important in maintaining proper ionic balance and cell volume. This protein is phosphorylated in response to DNA damage. Three transcript variants encoding two different isoforms have been found for this gene.