Product datasheet

Anti-Kv7.1/KCNQ1 Antibody

Catalog Number: *A00310-1*

BOSTER
antibody and ELISA experts
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Building C21, 3rd to 5th Floors, Optics Valley Biopharmaceutical Accelerator,
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Basic Information

Product Name	Anti-Kv7.1/KCNQ1 Antibody
Gene Name	KCNQ1
Source	Rabbit
Clonality	Polyclonal
Isotype	IgG
Species Reactivity	human, mouse, rat
Tested Application	WB, IHC, ICC/IF, FCM
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human KCNQ1, different from the related mouse sequence by two amino acids, and from the related rat sequence by one amino acid.
Concentration	500 ug/ml
Purification	Immunogen affinity purified.
Observed MW	75 kDa
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 Flow Cytometry (Fixed): 1:50-200 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

Storage

12 months from date of receipt，-20℃ as supplied.

Background Information

Kv7.1 (KvLQT1) is a potassium channel protein whose primary subunit in humans is encoded by the KCNQ1 gene. This protein can form heteromultimers with two other potassium channel proteins, KCNE1 and KCNE3. Mutations in this gene are associated with hereditary long QT syndrome 1 (also known as Romano-Ward syndrome), Jervell and Lange-Nielsen syndrome, and familial atrial fibrillation. This gene exhibits tissue-specific imprinting, with preferential expression from the maternal allele in some tissues, and biallelic expression in others. And this gene is located in a region of

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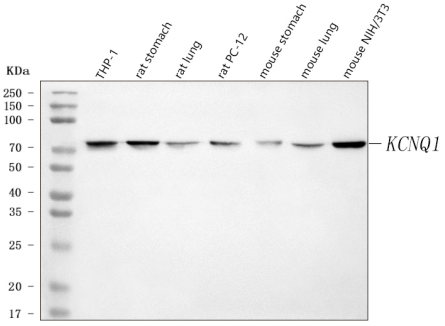
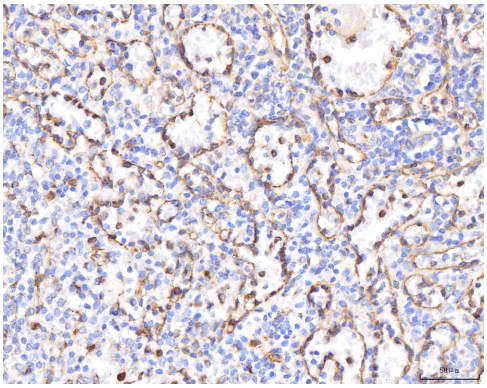
chromosome 11 amongst other imprinted genes that are associated with Beckwith-Wiedemann syndrome (BWS), and itself has been shown to be disrupted by chromosomal rearrangements in patients with BWS. Alternatively spliced transcript variants have been found for this gene.

Selected Validation Data



Western blot analysis of Kv7.1/KCNQ1 using anti-Kv7.1/KCNQ1 antibody (A00310-1). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human THP-1 whole cell lysates,
Lane 2: rat stomach tissue lysates,
Lane 3: rat lung tissue lysates,
Lane 4: rat PC-12 whole cell lysates,
Lane 5: mouse stomach tissue lysates,
Lane 6: mouse lung tissue lysates,
Lane 7: mouse NIH/3T3 whole cell lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-Kv7.1/KCNQ1 antigen affinity purified polyclonal antibody (A00310-1) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for Kv7.1/KCNQ1 at approximately 75 kDa. The expected band size for Kv7.1/KCNQ1 is at 75 kDa.



IHC analysis of Kv7.1/KCNQ1 using anti-Kv7.1/KCNQ1 antibody (A00310-1).
Kv7.1/KCNQ1 was detected in a paraffin-embedded section of human liver cancer tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-Kv7.1/KCNQ1 Antibody (A00310-1) at a dilution of 1:200 and developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.

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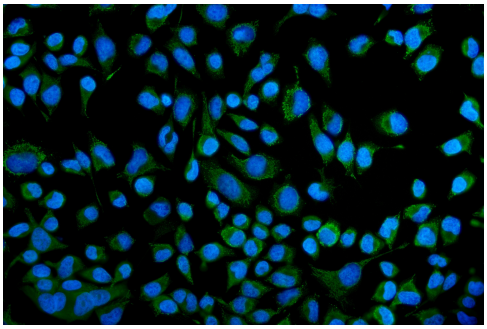
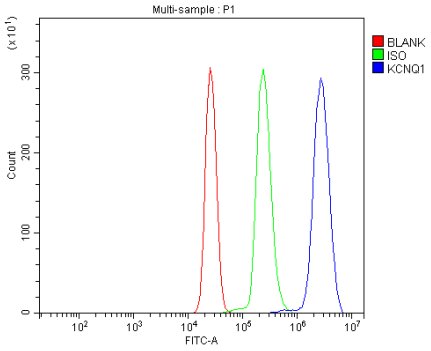


ICC/IF analysis of Kv7.1/KCNQ1 using anti-Kv7.1/KCNQ1 antibody (A00310-1).
Kv7.1/KCNQ1 was detected in an immunocytochemical section of Hela cells. The section was incubated with rabbit anti-Kv7.1/KCNQ1 Antibody (A00310-1) at a dilution of 1:100. Fluoro488 Conjugated Goat Anti-Rabbit IgG (Green) (Catalog # BA1127) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).



Flow Cytometry analysis of U937 cells using anti-Kv7.1/KCNQ1 antibody (A00310-1).
Overlay histogram showing U937 cells stained with A00310-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Kv7.1/KCNQ1 Antibody (A00310-1) at 1:100 dilution for 30 min at 20°C. Fluoro488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.