

Basic Information

Product Name	Anti-Kv7.1/KCNQ1 Antibody	
Gene Name	KCNQ1	
Source	Rabbit	
Isotype	IgG	
Species Reactivity	human, mouse, rat	
Tested Application	WB, IHC, ICC/IF, FCM	
Contents	500 ug/ml antibody with PBS , 0.02% NaN ₃ , 1 mg BSA and 50% glycerol.	
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human KCNQ1 (356-397aa QKQQRQKHFNRQIPAAASLIQTAWRCYAAENPDSSTWKIYIR), 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	75KD	
Dilution Ratios	Western blot (WB): Immunohistochemistry in paraffin section (IHC): Immunocytochemistry/Immunofluorescence (ICC/IF): Flow cytometry (FCM): (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.	1:500-2000 1:50-400 1:50-400 1-3 µg/1x10 ⁶ cells

Storage

12 months from date of receipt, -20°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

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 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

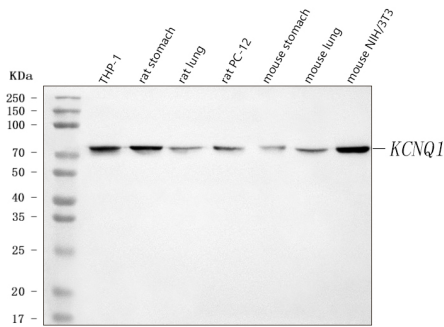


Figure 1. Western blot analysis of anti- KCNQ1 antibody (A15277-1). The sample well of each lane was loaded with 50ug of sample under reducing conditions.

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.

Use rabbit anti- KCNQ1 1:1000, probed with a goat anti-rabbit IgG- HRP secondary antibody. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog#EK1002). A specific band was detected for KCNQ1 at approximately 75KD. The expected band size for KCNQ1 is at 75KD.

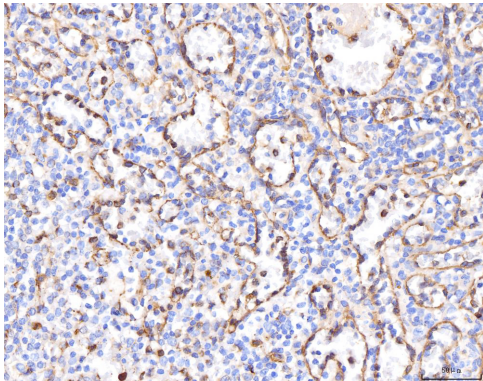


Figure 2.IHC analysis using anti-KCNQ1 antibody (A00310-1). detected in paraffin-embedded section of human liver cancer tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

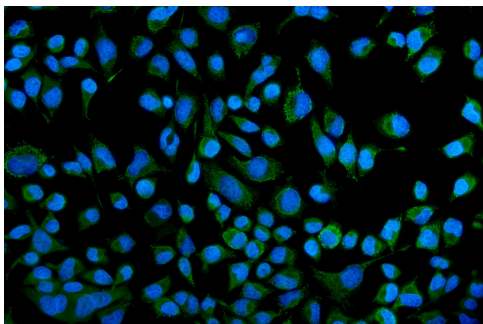


Figure 6.ICC analysis using anti-KCNQ1 antibody (A00310-1) was detected in immersion fixed HELA cell line . Cells were stained using the Dylight488-conjugated Anti-rabbit IgG Secondary Antibody (green)(Catalog#BA1127) and counterstained with DAPI (blue).

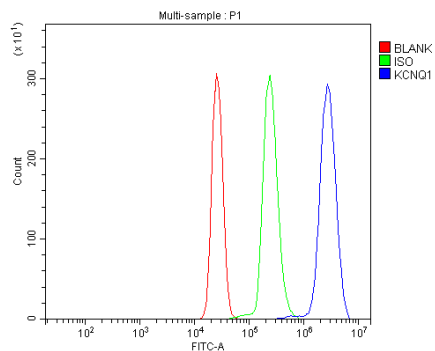


Figure 7. Flow cytometry analysis of U937 cell (1x10⁶) DyLight 488 conjugated goat anti-rabbit IgG (blue) was used as secondary antibody. Isotype control antibody (Green line) was rabbit IgG DyLight 488. Unlabelled sample (Red line).