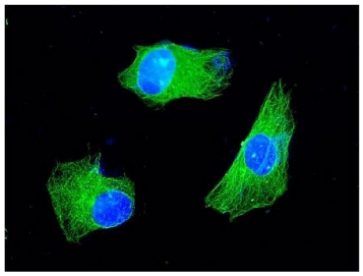
KChIP2 Antibody / Kv4 Potassium Channel Regulator Antibody (R32335)

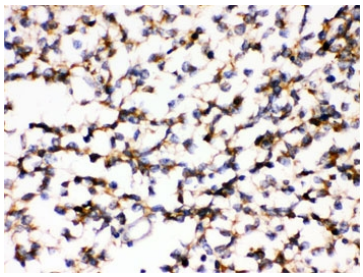
Catalog No.	Formulation	Size
R32335	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

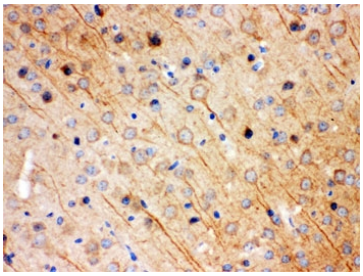
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	Q9NS61
Localization	Cytoplasmic, membrane
Applications	Western Blot : 0.1-0.5ug/ml Immunohistochemistry (FFPE) : 0.5-1ug/ml Immunofluorescence (FFPE) : 2-4ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This KChIP2 Antibody / Kv4 Potassium Channel Regulator Antibody is available for research use only.



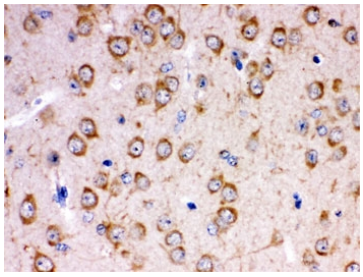
KChIP2 Antibody in Human SH-SY5Y Neuroblastoma Cells IF. Immunofluorescence testing of FFPE human SH-SY5Y neuroblastoma cells with KChIP2 Antibody / Kv4 Potassium Channel Regulator Antibody (green). HIER was performed by steaming in pH 6 citrate buffer for 20 min. Strong cytoplasmic staining is observed throughout the cells, with prominent filamentous and peripheral signal surrounding the DAPI-stained nuclei (blue).



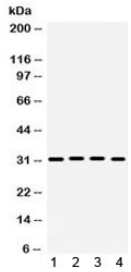
KChIP2 Antibody in Human Glioma IHC. Immunohistochemistry testing of KChIP2 Antibody / Kv4 Potassium Channel Regulator Antibody in FFPE human glioma tissue. HIER was performed by boiling sections in pH 6, 10 mM citrate buffer for 20 min followed by cooling prior to staining. Distinct cytoplasmic and membranous immunoreactivity is observed in populations of cells throughout the tested tissue.



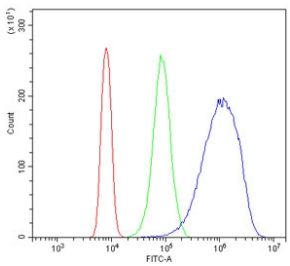
KChIP2 Antibody in Mouse Brain IHC. Immunohistochemistry testing of KChIP2 Antibody / Kv4 Potassium Channel Regulator Antibody in FFPE mouse brain tissue. HIER was performed by boiling sections in pH 6, 10 mM citrate buffer for 20 min followed by cooling prior to staining. Cytoplasmic and membranous immunoreactivity is observed in neuronal cells within the tested brain tissue.



KChIP2 Antibody in Rat Brain IHC. Immunohistochemistry testing of KChIP2 Antibody / Kv4 Potassium Channel Regulator Antibody in FFPE rat brain tissue. HIER was performed by boiling sections in pH 6, 10 mM citrate buffer for 20 min followed by cooling prior to staining. Strong cytoplasmic and membranous staining is observed in neuronal cell bodies, consistent with expression of the Kv4 channel regulator KChIP2.



KChIP2 Antibody in Rat Brain, Rat and Mouse Heart, and Human 22Rv1 Cells WB. Western blot testing of KChIP2 Antibody / Kv4 Potassium Channel Regulator Antibody in 1) rat brain, 2) rat heart, 3) mouse heart and 4) human 22Rv1 prostate carcinoma cell lysates. A strong, discrete band is observed at approximately 31 kDa in all four samples, consistent with the expected molecular weight of KChIP2.



KChIP2 Antibody in Human K562 Leukemia Cells FACS. Flow cytometry testing of human K562 leukemia cells with KChIP2 Antibody / Kv4 Potassium Channel Regulator Antibody at 1 ug/million cells following blocking with goat serum. Cells alone are shown in red, the isotype control in green and KChIP2 antibody staining in blue. A pronounced fluorescence shift is observed relative to both controls, demonstrating detection of KChIP2 in the tested cells.

Description

KChIP2 Antibody / Kv4 Potassium Channel Regulator Antibody recognizes potassium voltage-gated channel interacting protein 2, a calcium-binding protein encoded by the KCNIP2 gene. KChIP2 belongs to the KChIP family of EF-hand proteins and is expressed prominently in excitable tissues, particularly the heart and brain. It functions as an auxiliary component of voltage-gated Kv4 potassium channel complexes and contributes to regulation of membrane excitability.

KChIP2 interacts with the cytoplasmic N-terminal regions of Kv4 alpha subunits, including Kv4.2 and Kv4.3. Association with KChIP proteins can influence Kv4 channel trafficking, surface expression and gating properties, thereby modifying rapidly inactivating A-type potassium currents. These currents contribute to action potential properties in neurons and to

the transient outward potassium current (Ito) involved in cardiac repolarization.

KChIP2 contains a conserved C-terminal region with multiple EF-hand motifs characteristic of the calcium-binding KChIP family. In the heart, KChIP2 is an important component of Kv4-containing channel complexes and contributes to regulation of cardiomyocyte electrical activity. Alterations in KChIP2 expression and function have consequently been investigated in cardiac hypertrophy, electrical remodeling, heart failure and arrhythmia-related mechanisms. Research also indicates that KChIP2 can influence additional ion-channel and calcium-handling pathways beyond its classical role as a Kv4 auxiliary protein.

This rabbit polyclonal KChIP2 Antibody recognizes KCNIP2 and provides a reagent for studying potassium channel regulation, calcium-binding protein biology and electrical signaling in excitable cells. NSJ Bioreagents provides this antibody for research into KChIP2 expression and the molecular mechanisms governing Kv4 channel function. A Kv4 Potassium Channel Regulator Antibody can support investigation of the relationship between KChIP2 and ion-channel-dependent control of cellular excitability.

Explore our Signal Transduction Antibodies page for additional reagents targeting proteins involved in ion channel regulation, cellular signaling and control of membrane excitability.

Application Notes

Optimal dilution of the KChIP2 Antibody / Kv4 Potassium Channel Regulator Antibody should be determined by the researcher.

Immunogen

Amino acids DEFELSTVCHRPEGLEQLQEQTKFTRKELQVLYR of human KChIP2 were used as the immunogen for the KChIP2 antibody.

Storage

After reconstitution, the KChIP2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

KChIP2 antibody, KCNIP2 antibody, Kv channel-interacting protein 2 antibody, Kv channel interacting protein 2 antibody, A-type potassium channel modulatory protein 2 antibody