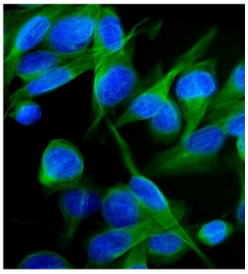
Kv1.2 Antibody / Voltage-Gated Potassium Channel Antibody (R31982)

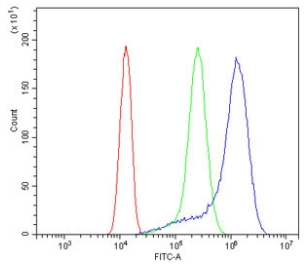
Catalog No.	Formulation	Size
R31982	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

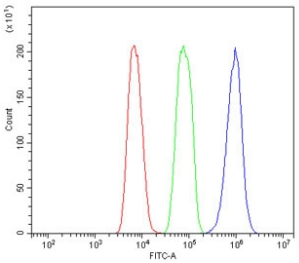
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	P16389
Applications	Western blot: 0.1-0.5ug/ml Immunofluorescence (FFPE): 2-4ug/ml Flow cytometry: 1-3ug/million cells Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Kv1.2 Antibody / Voltage-Gated Potassium Channel Antibody is available for research use only.



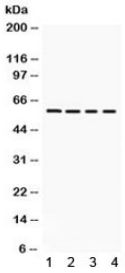
Kv1.2 Antibody Human U-2 OS Cell IF. Immunofluorescent staining of FFPE human U-2 OS cells with Kv1.2 antibody (green). Heat-induced epitope retrieval (HIER) was performed by steaming sections in pH 6 citrate buffer for 20 minutes prior to staining. Nuclei are counterstained with DAPI (blue). Kv1.2 immunoreactivity is observed predominantly along the plasma membrane and within the cytoplasm, consistent with the expected localization of this voltage-gated potassium channel involved in regulating neuronal membrane excitability and action potential repolarization.



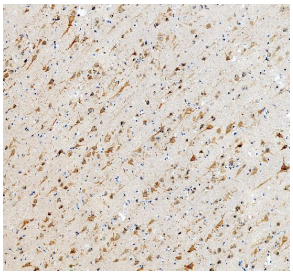
Kv1.2 Antibody A431 Cell FACS. Flow cytometry testing of human A431 cells with Kv1.2 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Kv1.2 antibody.



Kv1.2 Antibody Rat C6 Cell FACS. Flow cytometry testing of rat C6 cells with Kv1.2 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Kv1.2 antibody.



Kv1.2 Antibody Multi-Species WB. Western blot testing of 1) rat kidney, 2) rat brain, 3) mouse brain and 4) mouse kidney lysates with Kv1.2 antibody. A single band is detected at approximately 57 kDa in all four samples, consistent with the predicted molecular weight of Kv1.2. The results demonstrate specific detection of endogenous Kv1.2 across both rat and mouse tissues, with comparable expression observed in brain and kidney lysates.



Kv1.2 Antibody Human Cerebral Cortex and Hippocampus IHC. Immunohistochemical staining of FFPE human cerebral cortex and hippocampus tissue with Kv1.2 antibody at 2 ug/ml. Heat-induced epitope retrieval (HIER) was performed by boiling tissue sections in pH 8 EDTA buffer prior to staining. Kv1.2 immunoreactivity is observed predominantly within neurons and the surrounding neuropil, consistent with the expected localization of this voltage-gated potassium channel involved in regulating neuronal membrane excitability and action potential repolarization. Cell nuclei are counterstained with hematoxylin (blue).

Description

Kv1.2 Antibody recognizes Kv1.2, also known as Potassium Voltage-Gated Channel Subfamily A Member 2 (KCNA2), a membrane-spanning potassium channel that plays a critical role in regulating neuronal membrane excitability and electrical signaling. Kv1.2 belongs to the Shaker-related Kv1 family of voltage-gated potassium channels and mediates delayed rectifier potassium currents that promote membrane repolarization following action potentials. By controlling potassium ion flux across the plasma membrane, Kv1.2 influences action potential duration, firing frequency, synaptic transmission, and neuronal network activity. Consequently, Kv1.2 Antibody is widely used to investigate neuronal electrophysiology, ion channel biology, and nervous system function.

Kv1.2 is highly expressed throughout the central nervous system, particularly within the cerebral cortex, hippocampus, cerebellum, brainstem, and spinal cord. The channel is enriched at axons, presynaptic terminals, juxtaparanodal regions of myelinated fibers, and other specialized membrane domains where it regulates neuronal excitability. Kv1.2 frequently assembles with other Kv1 family members to form heterotetrameric potassium channels possessing distinct electrophysiological properties. Through these interactions, Kv1.2 contributes to precise control of synaptic transmission, neurotransmitter release, and neuronal communication. As a result, Kv1.2 Antibody has become an important tool for studies examining ion channel distribution and neural circuit function.

Altered KCNA2 expression or function has been associated with epilepsy, developmental and epileptic encephalopathies, hereditary ataxia, peripheral nerve disorders, and other neurological diseases characterized by abnormal neuronal excitability. Both gain-of-function and loss-of-function KCNA2 variants can disrupt membrane repolarization and impair normal electrical signaling within the nervous system. In addition to inherited disorders, Kv1.2 dysfunction has been investigated in neurodegenerative diseases, traumatic nervous system injury, and chronic pain. Because voltage-gated potassium channels are essential regulators of excitable tissues, Kv1.2 remains an important target for studies exploring disease mechanisms and the development of ion channel-directed therapeutics.

NSJ Bioreagents offers highly validated Kv1.2 Antibody products for reliable detection of endogenous Kv1.2 in nervous system tissues and cultured cells. These antibodies support investigations into neuronal membrane excitability, potassium channel biology, synaptic transmission, and neurological disease while enabling researchers to characterize Kv1.2 expression, localization, and regulation. Whether studying normal electrical signaling or disorders involving dysfunctional ion channel activity, Kv1.2 Antibody provides a dependable tool for neuroscience and ion channel research.

Learn more about proteins that regulate neuronal excitability, synaptic transmission and nervous system function on our Neuroscience Antibodies page.

Application Notes

Optimal dilution of the Kv1.2 Antibody / Voltage-Gated Potassium Channel Antibody should be determined by the researcher.

Immunogen

Amino acids NNSNEDFREENLKTANCTLANTNYVNITKMLTDV of human Kv1.2 were used as the immunogen for the Kv1.2 antibody.

Storage

After reconstitution, the Kv1.2 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

KCNA2 antibody, Potassium Voltage-Gated Channel Subfamily A Member 2 antibody, Voltage-Gated Potassium Channel Kv1.2 antibody, Delayed Rectifier Potassium Channel antibody, Potassium Channel Subunit Kv1.2 antibody, BK2 antibody

Copyright © NSJ Bioreagents. All rights reserved.