abcam

Product datasheet

Anti-KCNQ2 antibody [N26A/23] ab84812

1 References　画像数 4

製品の概要

製品名	Anti-KCNQ2 antibody [N26A/23]
製品の詳細	Mouse monoclonal [N26A/23] to KCNQ2
由来種	Mouse
アプリケーション	**適用あり:** IHC-P, IHC-Fr, ICC/IF, IP, WB, Flow Cyt
種交差性	**交差種:** Mouse, Rat, Human
免疫原	Fusion protein, corresponding to amino acids 1-59 of Human KCNQ2 (accession number O43526)
ポジティブ・コントロール	COS-1 cell lysate transiently expressing KCNQ2
特記事項	The clone number has been updated from S26A-23 to N26A/23, both clone numbers name the same antibody clone.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
バッファー	Preservative: 0.09% Sodium Azide Constituents: 50% Glycerol, PBS, pH 7.4
精製度	Protein G purified
ポリ/モノ	モノクローナル
クローン名	N26A/23
アイソタイプ	IgG1

アプリケーション

Our Abpromise guarantee covers the use of **ab84812** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

アプリケーション	Abreviews	特記事項
IHC-P		Use at an assay dependent concentration.
IHC-Fr		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.
WB		Use a concentration of 1 - 10 µg/ml. Predicted molecular weight: 95 kDa.
Flow Cyt		Use 1µg for 10^6 cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

ターゲット情報

機能

Probably important in the regulation of neuronal excitability. Associates with KCNQ3 to form a potassium channel with essentially identical properties to the channel underlying the native M-current, a slowly activating and deactivating potassium conductance which plays a critical role in determining the subthreshold electrical excitability of neurons as well as the responsiveness to synaptic inputs. KCNQ2/KCNQ3 current is blocked by linopirdine and XE991, and activated by the anticonvulsant retigabine. Muscarinic agonist oxotremorine-M strongly suppress KCNQ2/KCNQ3 current in cells in which cloned KCNQ2/KCNQ3 channels were coexpressed with M1 muscarinic receptors.

組織特異性

In adult and fetal brain. Highly expressed in areas containing neuronal cell bodies, low in spinal chord and corpus callosum. Isoform 2 is preferentially expressed in differentiated neurons. Isoform 6 is prominent in fetal brain, undifferentiated neuroblastoma cells and brain tumors.

関連疾患

Defects in KCNQ2 are the cause of benign familial neonatal seizures type 1 (BFNS1) [MIM:121200]. A disorder characterized by clusters of seizures occurring in the first days of life. Most patients have spontaneous remission by 12 months of age and show normal psychomotor development. Some rare cases manifest an atypical severe phenotype associated with epileptic encephalopathy and psychomotor retardation. The disorder is distinguished from benign familial infantile seizures by an earlier age at onset. In some patients, neonatal convulsions are followed later in life by myokymia, a benign condition characterized by spontaneous involuntary contractions of skeletal muscles fiber groups that can be observed as vermiform movement of the overlying skin. Electromyography typically shows continuous motor unit activity with spontaneous oligo- and multiplet-discharges of high intraburst frequency (myokymic discharges). Some patients may have isolated myokymia.
Defects in KCNQ2 are the cause of epileptic encephalopathy early infantile type 7 (EIEE7) [MIM:613720]. EIEE7 is an autosomal dominant seizure disorder characterized by infantile onset of refractory seizures with resultant delayed neurologic development and persistent neurologic abnormalities.

配列類似性

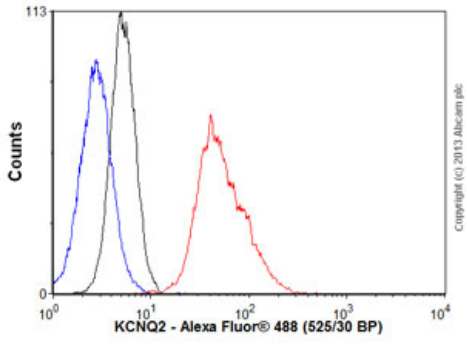
Belongs to the potassium channel family. KQT (TC 1.A.1.15) subfamily. Kv7.2/KCNQ2 sub-subfamily.

ドメイン

The segment S4 is probably the voltage-sensor and is characterized by a series of positively charged amino acids at every third position.

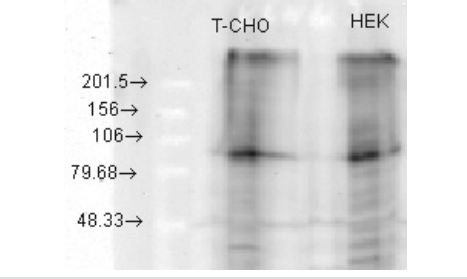
翻訳後修飾	In Xenopus oocytes KCNQ2/KCNQ3 heteromeric current can be increased by intracellular cyclic AMP, an effect that depends on phosphorylation of Ser-52 in the N-terminus region.
細胞内局在	Membrane.

画像



Flow Cytometry - Anti-KCNQ2 antibody [N26A/23] (ab84812)

Overlay histogram showing SH-SH5Y cells stained with ab84812 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab84812, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H&L) (ab150113) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in SH-SY5Y cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

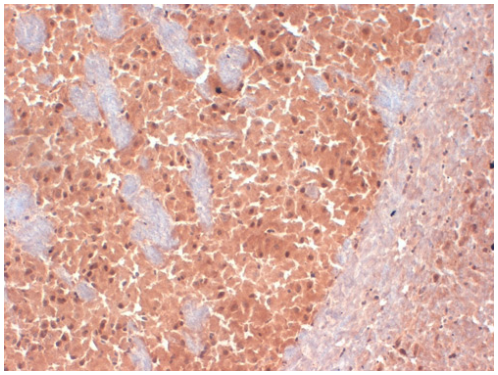


Western blot - Anti-KCNQ2 antibody [N26A/23] (ab84812)

All lanes : Anti-KCNQ2 antibody [N26A/23] (ab84812) at 10 µg/ml

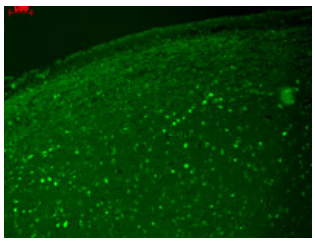
Lane 1 : CHO cell lysate
Lane 2 : HEK cell lysate

Predicted band size: 95 kDa



Immunohistochemistry (Frozen sections) - Anti-KCNQ2 antibody [N26A/23] (ab84812)

ab84812 staining KCNQ2 in Mouse brain tissue sections by Immunohistochemistry (IHC-Fr - frozen sections).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KCNQ2 antibody [N26A/23] (ab84812)

ab84812 staining KCNQ2 in human hippocampal tissue by IHC-P (Bouin's fixed paraffin embedded).

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