Datasheet for ABIN7043632

anti-KCNN3 antibody (Intracellular) (Atto 594)

1 Image

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Overview

Quantity:	50 µL
Target:	KCNN3
Binding Specificity:	AA 2-21, Intracellular
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This KCNN3 antibody is conjugated to Atto 594
Application:	Immunohistochemistry (IHC), Immunofluorescence (IF), Immunochromatography (IC), Flow Cytometry (FACS)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to KCNN3 (KCa2.3, SK3) Channel Conjugated to the Fluorescent Dye ATTO-594
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: DTSGHFHDSGVGDLDEDPKC, corresponding to amino acid residues 2-21 of human KCNN3
Isotype:	IgG
Specificity:	Intracellular, N-terminus
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Rat,mouse,pig - identical

Product Details

Characteristics:	Anti-KCNN3 (KCa2.3, SK3) (N-term) Antibody (ABIN7043631, ABIN7044932 and ABIN7044933) is a highly specific antibody directed against an epitope of the human protein. The antibody can be used in western blot, immunocytochemistry, and immunohistochemistry applications. It has been designed to recognize KCNN3 from human, rat, and mouse samples. \nAnti-KCNN3 (KCa2.3, SK3) (N-term)-ATTO Fluor-594 Antibody (ABIN7043632) is directly labeled with an fluorescent dye. ATTO dyes are characterized by strong absorption (high extinction coefficient), high fluorescence quantum yield, and high photo-stability. The fluorescent label belongs to the class of Rhodamine dyes and can be used with fluorescent equipment typically optimized to detect Texas Red and Alexa-594. Anti-KCNN3 (KCa2.3, SK3) (N-term)-ATTO Fluor-594 Antibody is specially suited to experiments requiring simultaneous labeling of different markers.
Purification:	Affinity purified on immobilized antigen.
Grade:	KO Validated

Target Details

Target:	KCNN3
Alternative Name:	KCNN3 (KCNN3 Products)
Background:	Small conductance calcium-activated potassium channel protein 3, SKCa3,KCa2.3 (KCNN3, SK3) is a member of the Ca2+-activated K+ channel family with small conductance that includes KCa2.1 (KCNN1, SK1) and KCa2.2 (KCNN2, SK2). The channel is voltage insensitive and is activated by intracellular Ca2+ in the submicromolar range. It has, though, a similar topology to that of voltage-dependent K+ channels (KV channels), that is six transmembrane domains and intracellular N- and C-termini. The functional channel of all the KCa2 family members is a multimeric protein composed of four pore-forming subunits.KCa2 channels are extremely sensitive to the levels of intracellular Ca2+ and concentrations as low as 300-700 nM can open the channels very rapidly (5-15 ms). Hence, the KCa2 channels are highly sensitive and fast Ca2+ sensors resembling other known Ca2+-binding proteins. This type of Ca2+-dependent activation is achieved by the constitutive binding of the KCa2 channels to calmodulin, a highly expressed Ca2+-binding protein via a calmodulin-binding domain situated at the cytoplasmic C-terminus.Pharmacologically, the KCa2 channels are the only known targets of the bee venom toxin Apamin, with KCa2.1 being the least sensitive, KCa2.2 the most sensitive and KCa2.3 showing intermediate sensitivity.KCa2.3 is predominantly expressed in the nervous system although expression in endothelial cells, heart and liver have been described.KCa2.3 is known to be involved in the regulation of neuronal excitability. They do so

Target Details

	mainly via a phenomenon known as after hyperpolarization in which KCa2 channels open in response to increased intracellular Ca2+ concentrations that result from the entry of extracellular Ca2+ through voltage-dependent Ca2+ channels during action potentials. In this way, KCa2 channels effectively form a Ca2+-mediated feedback loop.KCa2.3 is involved in the control of firing rate and subsequent dopamine secretion from midbrain dopaminergic neurons. Since malfunction of these neurons is involved in several pathological disorders such as Parkinson's disease and Schizophrenia, modulators of the KCa2.3 channels have been proposed to be of therapeutic value in these diseases. Alternative names: KCNN3 (KCa2.3, SK3), Small conductance calcium-activated potassium channel, SKCa3
Gene ID:	3782
NCBI Accession:	NM_002249
UniProt:	Q9UGI6

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: N/A Application Dilutions Western blot wb: N/A
Comment:	Cited Application: ICC|FC Negative Control: (ABIN7236815) Blocking Peptide: (ABIN7236815)
Restrictions:	For Research Use only

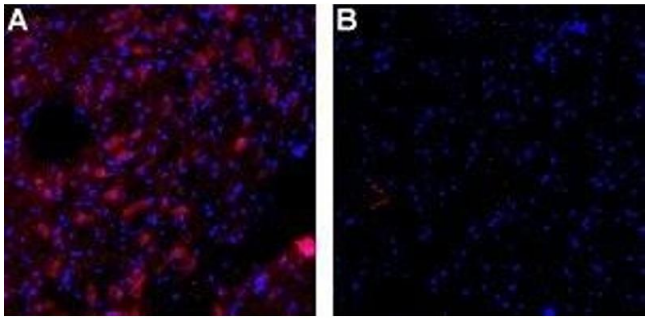
Handling

Format:	Lyophilized
Reconstitution:	Recosntitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 1 % BSA with 0.05 % sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which

Handling

	should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C, protected from the light, for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).

Images



Immunohistochemistry

Image 1. Expression of KCa2.3 (SK3) in rat brain - Immunohistochemical staining of rat brain perfusion-fixed frozen sections using Anti-KCNN3 (KCa2.3, SK3) (N-term)-ATTO Fluor-594 Antibody (ABIN7043632). A. SK3 channel (red) is visualized in the rat substantia nigra pars compacta. B. Pre-incubation of the Anti-KCNN3 (KCa2.3, SK3) (N-term)-ATTO Fluor-594 Antibody with the immunogen peptide, blocks specific staining. DAPI Nissl is used as the counterstain (blue).