

## Product Datasheet

Anti-Kv4.2 K<sup>+</sup> Channel Antibody FL490 Conjugate

## Overview

<b>Catalog #</b>	75-016-FL490
<b>Conjugate</b>	FL490 Ex: 491 nm, Em: 515 nm
<b>Isotype</b>	IgG1
<b>Clone Number</b>	K57/1
<b>Size</b>	200 µL
<b>Concentration</b>	0.5 mg/mL
<b>Host Species</b>	Mouse Monoclonal
<b>Format</b>	Purified by Protein A chromatography
<b>Buffer</b>	PBS with 0.09% azide
<b>Applications</b>	ICC, IHC
<b>Species Reactivity</b>	Human, Mouse, and Rat
<b>Immunogen</b>	Synthetic peptide amino acids 209 –225 (extracellular S1-S2 loop) of rat Kv4.2 (CGSSPGHIKELPSGERY; accession number Q63881)
<b>Molecular Weight</b>	75-80 kDa
<b>Cite this Antibody</b>	Antibodies Inc Cat# 75-016-FL490, RRID: AB_2939124

## Details

<b>Target Description</b>	Kv4.2 K <sup>+</sup> channel (Potassium voltage-gated channel subfamily D member 2 ) is a member of the mammalian Shal-related family and potassium voltage gated channel subunit family. Kv4 subunit family includes four Kv4 α subunits (Kv4.1, Kv4.2 and Kv4.3). However only Kv4.2 and Kv4.3 are predominantly expressed in the brain (Alfaro-Ruiz et al., 2019). Kv4.2 K <sup>+</sup> is encoded by gene KCND2 in human. It helps to regulate the action potential's circadian rhythm firing in suprachiasmatic nucleus neurons. This process regulates the circadian rhythm of locomotor activity. It has been demonstrated that Kv 4.2 and Kv4.3 are often colocalized with pain-modulating molecules in rat spinal lamina II excitatory interneurons (Huang et al., 2005).
<b>Specificity</b>	No cross reactivity against rat Kv4.3
<b>Purification Method</b>	Produced by in vitro bioreactor culture of hybridoma line followed by Protein A affinity chromatography and conjugation of purified mAb. Purified mAbs are >90% specific antibody.
<b>Quality Control Tests</b>	Each new lot of antibody is quality control tested by western blot on rat whole brain lysate and confirmed to stain the expected molecular weight band.

**Storage**

Aliquot and store at  $\leq -20^{\circ}\text{C}$  for long term storage. For short term storage, store at  $2-8^{\circ}\text{C}$ . For maximum recovery of product, centrifuge the vial prior to removing the cap.

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