

CaV1.3 Polyclonal Antibody | anti-CaV1.3 antibody

Anti-CaV1.3 Antibody

CATALOG # AAA46315	REACTIVITY Mouse, Rat Predicted to work with: Human	APPLICATIONS Western Blot
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PRODUCT SYNONYMS

CaV1.3; Polyclonal Antibody; Anti-CaV1.3 Antibody; Voltage-dependent L-type calcium channel subunit alpha-1D; alpha-1 polypeptide; CAC1D_HUMAN; CACH3; CACN4; CACNA 1D; CACNA1D; CACNL1A2; Calcium channel; Calcium channel L type alpha 1 polypeptide isoform 2; Calcium channel neuroendocrine/brain type alpha 1 subunit; Calcium channel voltage dependent L type alpha 1; Calcium channel voltage dependent L type alpha 1D subunit; Cav1.3; CCHL1A2; L type; PASNA; SANDD; Voltage dependent L type calcium channel subunit alpha 1D; Voltage gated calcium channel alpha 1 subunit; Voltage gated calcium channel alpha subunit Cav1.3; Voltage gated calcium channel subunit alpha Cav1.3; Voltage-gated calcium channel subunit alpha Cav1.3; calcium channel; voltage-dependent; alpha 1D subunit; anti-CaV1.3 antibody

PRODUCT SPECIFICATIONS

Reactivity	Mouse, Rat Predicted to work with: Human
Clonality	Polyclonal
Purity/Purification	Immunogen Affinity Purified
Form/Format	Lyophilized. Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Na ₃ N.
Sequence Length	2181
Applicable Applications for anti-CaV1.3 antibody	WB (Western Blot)
Immunogen	E Coli-derived human CaV1.3 recombinant protein (Position: M1-I180). Human CaV1.3 shares 99% and 98% amino acid (aa) sequence identity with mouse and rat CaV1.3, respectively.
Ig Type	Rabbit IgG
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Preparation and Storage	At -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquoted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.

IMAGES



FCM/FACS (Flow Cytometry)

Figure 2. Flow Cytometry analysis of U-87 cells using anti-CaV1.3 antibody (AAA46315). Overlay histogram showing U-87 cells stained with AAA46315 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CaV1.3 Antibody (AAA46315, 1ug/1x10⁶ cells) for 30 min at 20 degree C. DyLight[®]488 conjugated goat anti-rabbit IgG (5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



WB (Western Blot)

Figure 1. Western blot analysis of CAV1.3 using anti-CAV1.3 antibody (AAA46315). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Rat Brain Tissue Lysate, Lane 2: Mouse Brain Tissue Lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CAV1.3 antigen affinity purified polyclonal antibody at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for CAV1.3 at approximately 245KD. The expected band size for CAV1.3 is at 245KD.

ADDITIONAL INFORMATION

Related Product Information for anti-CaV1.3 antibody	Description: Rabbit IgG polyclonal antibody for Voltage-dependent L-type calcium channel subunit alpha-1D(CACNA1D) detection. Tested with WB in Human;Mouse;Rat. Background: CACNA1D is also known as PASNA, SANDD or Cav1.3. Voltage-dependent calcium channels mediate the entry of calcium ions into excitable cells, and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, and gene expression. Calcium channels are multisubunit complexes composed of alpha-1, beta, alpha-2/delta, and gamma subunits. The channel activity is directed by the pore-forming alpha-1 subunit, whereas the others act as auxiliary subunits regulating this activity. The distinctive properties of the calcium channel types are related primarily to the expression of a variety of alpha-1 isoforms, namely alpha-1A, B, C, D, E, and S. This gene encodes the alpha-1D subunit. Several transcript variants encoding different isoforms have been found for this gene.
References	1. Lieb A, et al. C-terminal modulatory domain controls coupling of voltage-sensing to pore opening in Cav1.3 L-type Ca(2+) channels. Biophys J, 2014 Apr 1. 2. Scholl UI, et al. Somatic and germline CACNA1D calcium channel mutations in aldosterone-producing adenomas and primary aldosteronism. Nat Genet, 2013 Sep.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4502527
NCBI GeneID	776
NCBI Accession #	NP_000711.1
NCBI GenBank Nucleotide #	NM_000720.3
UniProt Accession #	Q01668; Q13916; Q13931; Q71UT1; Q9UDC3; B0FYA3
Molecular Weight	242,417 Da
NCBI Official Full Name	voltage-dependent L-type calcium channel subunit alpha-1D isoform a
NCBI Official Synonym Full Names	calcium voltage-gated channel subunit alpha1 D
NCBI Official Symbol	CACNA1D
NCBI Official Synonym Symbols	CACH3; CACN4; PASNA; SANDD; Cav1.3; CCHL1A2; CACNL1A2
NCBI Protein Information	voltage-dependent L-type calcium channel subunit alpha-1D
UniProt Protein Name	Voltage-dependent L-type calcium channel subunit alpha-1D
UniProt Gene Name	CACNA1D
UniProt Synonym Gene Names	CACH3; CACN4; CACNL1A2; CCHL1A2
UniProt Entry Name	CAC1D_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.