

KV4.1 Polyclonal Antibody
Catalog # AP70696**Specification****KV4.1 Polyclonal Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	Q9NSA2
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal

KV4.1 Polyclonal Antibody - Additional Information**Gene ID** 3750**Other Names**

KCND1; Potassium voltage-gated channel subfamily D member 1; Voltage-gated potassium channel subunit Kv4.1

Dilution

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000. Not yet tested in other applications.

IHC-P~~N/A

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions

-20°C

KV4.1 Polyclonal Antibody - Protein Information**Name** KCND1 ([HGNC:6237](#))**Function**

A-type voltage-gated potassium channel that mediates transmembrane potassium transport in excitable membranes in the brain (PubMed:15454437). Mediates A-type current I(SA) in suprachiasmatic nucleus (SCN) neurons. Exhibits a low-threshold A-type current with a hyperpolarized steady-state inactivation midpoint and the recovery process was steeply voltage-dependent, with recovery being markedly faster at more negative potentials. May regulates repetitive firing rates in the suprachiasmatic nucleus (SCN) neurons and circadian rhythms in neuronal excitability and behavior. Contributes to the regulation of the circadian rhythm of action potential firing in suprachiasmatic nucleus neurons, which regulates the circadian rhythm of locomotor activity. The regulatory subunit KCNIP1 modulates the kinetics of channel inactivation, increases the current amplitudes and accelerates recovery from inactivation, shifts activation in a depolarizing direction (By similarity). The regulatory subunit DPP10 decreases the voltage sensitivity of the inactivation channel gating (PubMed:15454437).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:Q9NZV8}; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q9NZV8}

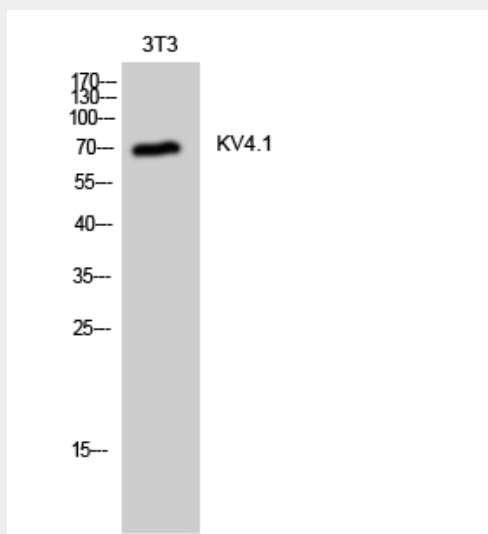
Tissue Location

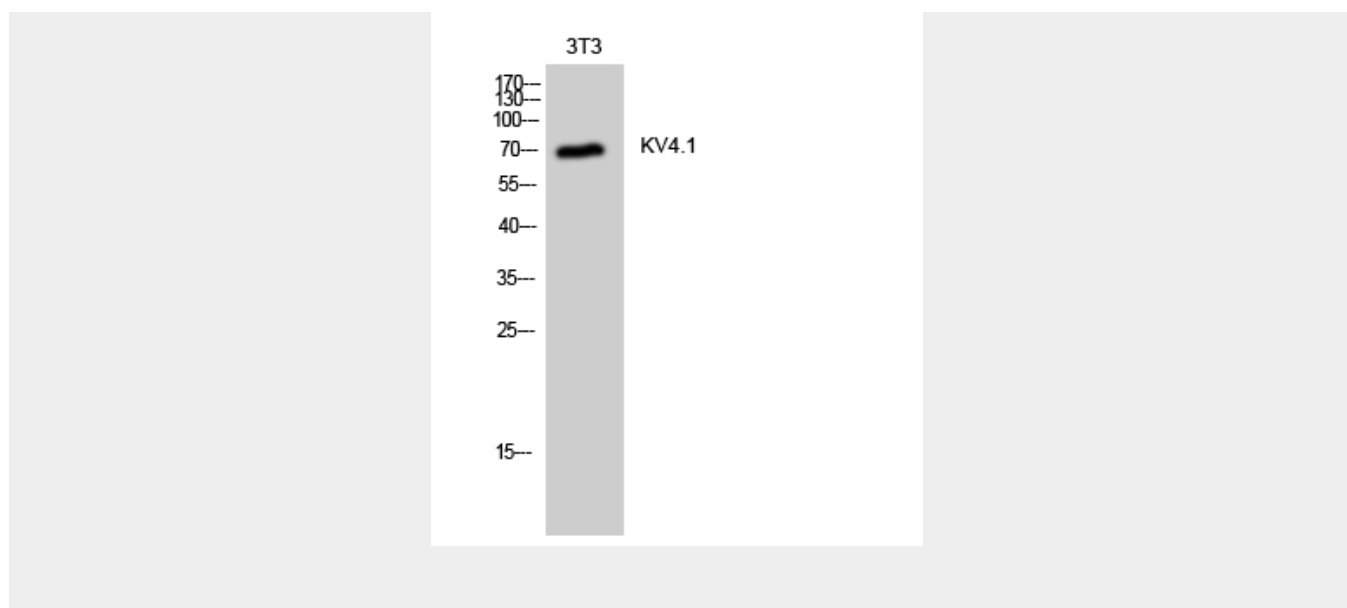
Widely expressed. Highly expressed in brain, in particular in cerebellum and thalamus; detected at lower levels in the other parts of the brain.

KV4.1 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KV4.1 Polyclonal Antibody - Images



KV4.1 Polyclonal Antibody - Background

Pore-forming (alpha) subunit of voltage-gated rapidly inactivating A-type potassium channels. May contribute to I(To) current in heart and I(Sa) current in neurons. Channel properties are modulated by interactions with other alpha subunits and with regulatory subunits.