

**ASIC1 Polyclonal Antibody**  
**Catalog # AP63621****Specification**

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**ASIC1 Polyclonal Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	<a href="#">P78348</a>
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal

**ASIC1 Polyclonal Antibody - Additional Information****Gene ID** 41**Other Names**

Acid-sensing ion channel 1 (ASIC1) (Amiloride-sensitive cation channel 2, neuronal) (Brain sodium channel 2) (BNAc2)

**Dilution**

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. 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

**ASIC1 Polyclonal Antibody - Protein Information****Name** ASIC1 ([HGNC:100](#))**Function**

Forms voltage-independent, pH-gated trimeric sodium channels that act as postsynaptic excitatory receptors in the nervous system, playing a crucial role in regulating synaptic plasticity, learning, and memory (PubMed:<a href="http://www.uniprot.org/citations/21036899" target="\_blank">21036899</a>, PubMed:<a href="http://www.uniprot.org/citations/32915133" target="\_blank">32915133</a>, PubMed:<a href="http://www.uniprot.org/citations/34319232" target="\_blank">34319232</a>). Upon extracellular pH drop this channel elicits transient, fast activating, and completely desensitizing inward currents (PubMed:<a href="http://www.uniprot.org/citations/21036899" target="\_blank">21036899</a>). Displays high selectivity for sodium ions but can also permit the permeation of other cations (PubMed:<a href="http://www.uniprot.org/citations/21036899" target="\_blank">21036899</a>). Regulates more or less directly intracellular calcium concentration and CaMKII phosphorylation, and thereby the density of dendritic spines. Modulates neuronal activity in the circuits underlying innate fear (By similarity).

**Cellular Location**

Cell membrane; Multi-pass membrane protein Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q6NXK8}. Cell projection, dendrite {ECO:0000250|UniProtKB:Q6NXK8}. Note=Isolated in synaptosomes from the dendritic synapses of neurons {ECO:0000250|UniProtKB:Q6NXK8}

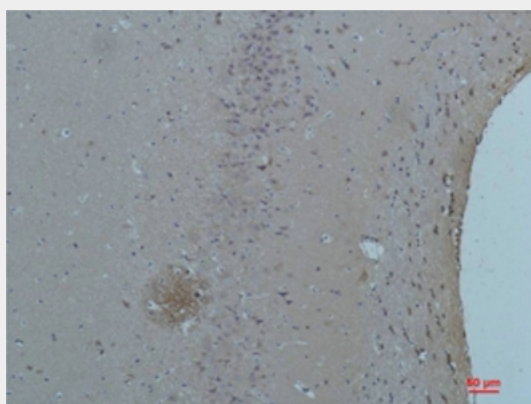
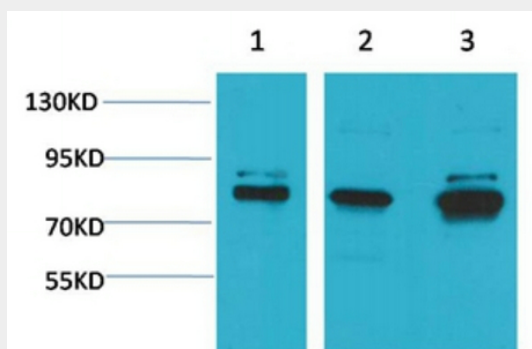
**Tissue Location**

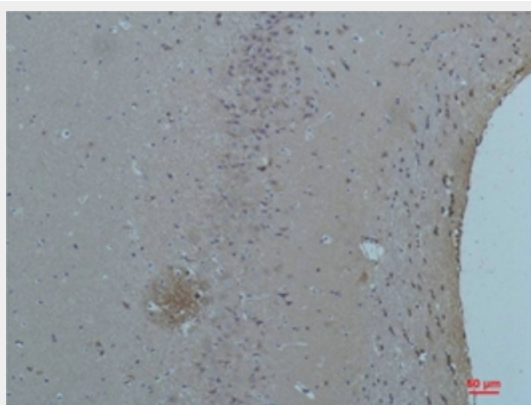
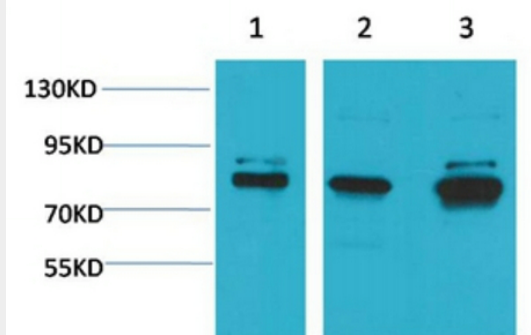
Expressed in neurons throughout the central and peripheral nervous system.

**ASIC1 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](#)

**ASIC1 Polyclonal Antibody - Images**



### ASIC1 Polyclonal Antibody - Background

Isoform 2 and isoform 3 function as proton-gated sodium channels; they are activated by a drop of the extracellular pH and then become rapidly desensitized. The channel generates a biphasic current with a fast inactivating and a slow sustained phase. Has high selectivity for sodium ions and can also transport lithium ions with high efficiency. Isoform 2 can also transport potassium, but with lower efficiency. It is nearly impermeable to the larger rubidium and cesium ions. Isoform 3 can also transport calcium ions. Mediates glutamate-independent  $\text{Ca}^{2+}$  entry into neurons upon acidosis. This  $\text{Ca}^{2+}$  overloading is toxic for cortical neurons and may be in part responsible for ischemic brain injury. Heteromeric channel assembly seems to modulate channel properties. Functions as a postsynaptic proton receptor that influences intracellular  $\text{Ca}^{2+}$  concentration and calmodulin-dependent protein kinase II phosphorylation and thereby the density of dendritic spines. Modulates activity in the circuits underlying innate fear.