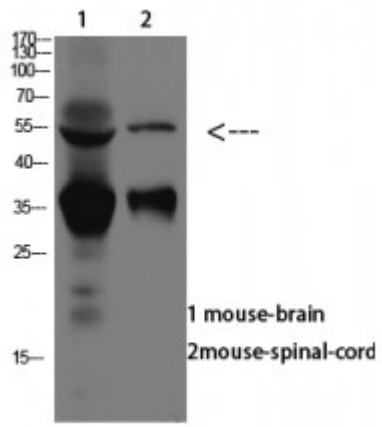
Anti-ASIC1 antibody



Description	Rabbit polyclonal to ASIC1.

Model	STJ98706
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, WB
Immunogen	Synthetic peptide from human ASIC1 protein.
Immunogen Region	220-280 aa
Gene ID	41
Gene Symbol	ASIC1
Dilution range	WB 1:500-2000, IHC 1:50-300ELISA 1:5000-20000 1:10000-20000
Specificity	The antibody detects endogenous ASIC1.
Tissue Specificity	Expressed in most or all neurons.
Purification	The antibody was affinity-purified from rabbit serum by affinity-chromatography using specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Acid-sensing ion channel 1 ASIC1 Amiloride-sensitive cation channel 2, neuronal Brain sodium channel 2 BNaC2
Molecular Weight	55kDa
Clonality	Polyclonal

Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS, pH 7.4, containing 0.02% sodium azide as Preservative and 50% Glycerol.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:100OMIM:602866
Alternative Names	Acid-sensing ion channel 1 ASIC1 Amiloride-sensitive cation channel 2, neuronal Brain sodium channel 2 BNaC2
Function	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 Ca(2+) entry into neurons upon acidosis. This 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 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. Isoform 1 does not display proton-gated cation channel activity.
Sequence and Domain Family	Channel opening involves a conformation change that affects primarily the extracellular domain and the second transmembrane helix and its orientation in the membrane. In the open state, the second transmembrane helix is nearly perpendicular to the plane of the membrane; in the desensitized state it is strongly tilted. Besides, the second transmembrane domain is discontinuously helical in the open state. The GAS motif of the selectivity filter is in an extended conformation, giving rise to a distinct kink in the polypeptide chain. A domain swap between subunits gives rise to a full-length transmembrane helix .
Cellular Localization	Cell membrane. Localizes in synaptosomes at dendritic synapses of neurons. Colocalizes with DLG4 .
Post-translational Modifications	Phosphorylation by PKA regulates interaction with PRKCABP and subcellular location. Phosphorylation by PKC may regulate the channel.