ARG11123
anti-ANK3 / Ankyrin G antibody [2A8]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [2A8] recognizes ANK3 / Ankyrin G
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-Fr, WB
Host	Mouse
Clonality	Monoclonal
Clone	2A8
Isotype	IgG1
Target Name	ANK3 / Ankyrin G
Species	Human
Immunogen	The C-terminal 398 amino acids of Human ANK3 / Ankyrin G.
Conjugation	Un-conjugated
Alternate Names	Ankyrin-3; Ankyrin-G; MRT37; ANKYRIN-G; ANK-3

Application Instructions

Application table

Application	Dilution
ICC/IF	1:1000
IHC-Fr	1:1000
WB	1:1000 - 1:2000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

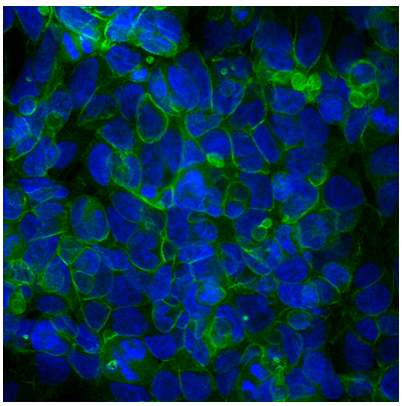
Form	Liquid
Purification	Purified
Buffer	PBS, 5 mM Sodium azide and 50% Glycerol.
Preservative	5 mM Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

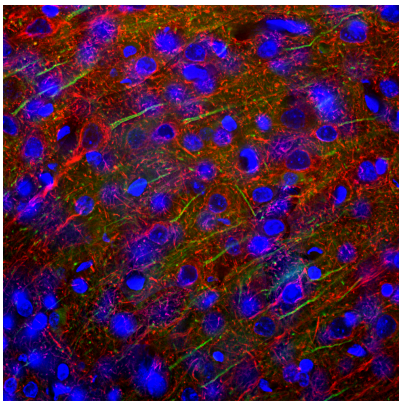
Gene Symbol	ANK3
Gene Full Name	ankyrin 3, node of Ranvier (ankyrin G)
Background	Ankyrins are a family of proteins that are believed to link the integral membrane proteins to the underlying spectrin-actin cytoskeleton and play key roles in activities such as cell motility, activation, proliferation, contact, and the maintenance of specialized membrane domains. Multiple isoforms of ankyrin with different affinities for various target proteins are expressed in a tissue-specific, developmentally regulated manner. Most ankyrins are typically composed of three structural domains: an amino-terminal domain containing multiple ankyrin repeats; a central region with a highly conserved spectrin binding domain; and a carboxy-terminal regulatory domain which is the least conserved and subject to variation. Ankyrin 3 is an immunologically distinct gene product from ankyrins 1 and 2, and was originally found at the axonal initial segment and nodes of Ranvier of neurons in the central and peripheral nervous systems. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Feb 2011]
Function	In skeletal muscle, required for costamere localization of DMD and betaDAG1 (By similarity). Membrane-cytoskeleton linker. May participate in the maintenance/targeting of ion channels and cell adhesion molecules at the nodes of Ranvier and axonal initial segments. Regulates KCNA1 channel activity in function of dietary Mg(2+) levels, and thereby contributes to the regulation of renal Mg(2+) reabsorption (PubMed:23903368). [Isoform 5]: May be part of a Golgi-specific membrane cytoskeleton in association with beta-spectrin. [UniProt]
Calculated Mw	480 kDa
Cellular Localization	Cytoplasm, cytoskeleton. Cell projection, axon. Cell membrane, sarcolemma. Cell junction, synapse, postsynaptic cell membrane. Lysosome. Note=In skeletal muscle, localized at costameres and neuromuscular junctions. In macrophages, associated with lysosomes. Isoform 5: Cytoplasm, cytoskeleton. Golgi apparatus. [UniProt]

Images



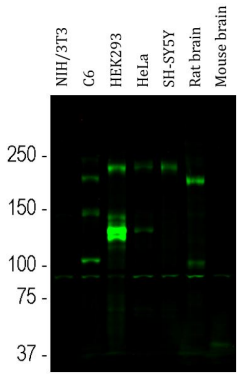
ARG11123 anti-ANK3 / Ankyrin G antibody [2A8] ICC/IF image

Immunofluorescence: HEK293 cells stained with ARG11123 anti-ANK3 / Ankyrin G antibody [2A8] (green) at 1:2000 dilution. Hoechst (blue) for nuclear staining.



ARG11123 anti-ANK3 / Ankyrin G antibody [2A8] IHC-Fr image

Immunohistochemistry: Frozen section of Rat brain cortex tissue stained with ARG11123 anti-ANK3 / Ankyrin G antibody [2A8] (green) at 1:2000 dilution, and co-stained with ARG10732 anti-Neurofilament NF-L antibody antibody (red) at 1:5000 dilution. Hoechst (blue) for nuclear staining. (Sample preparation: Following transcardial perfusion of rat with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45 µM, and free-floating sections were stained with above antibodies.).



ARG11123 anti-ANK3 / Ankyrin G antibody [2A8] WB image

Western blot: NIH/3T3, C6, HEK293, HeLa, SH-SY5Y, Rat brain and Mouse brain lysates stained with ARG11123 anti-ANK3 / Ankyrin G antibody [2A8] at 1:2000 dilution.

Bands at ~ 190 kDa represent Ankyrin G splice variants, higher molecular weight bands at 270 kDa and 480 kDa can be seen on longer exposure. Lower molecular weight bands are likely proteolytic fragments.