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NAIP Antibody

Catalog # ASC10244

Product Information

Application	WB, IF, ICC, E
Primary Accession	Q13075
Other Accession	AAC52047, 1737213
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	159582
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	NAIP antibody can be used for the detection of NAIP by Western blot at 0.5 to 2 g/mL. Antibody can also be used for immunocytochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	4671
Other Names	NAIP Antibody: BIRC1, NLRB1, psiNAIP, BIRC1, Baculoviral IAP repeat-containing protein 1, Neuronal apoptosis inhibitory protein, NLR family, apoptosis inhibitory protein
Target/Specificity	NAIP; Minor, lower molecular weight bands may represent alternately spliced forms.
Reconstitution & Storage	NAIP antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	NAIP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NAIP
Synonyms	BIRC1
Function	Anti-apoptotic protein which acts by inhibiting the activities of CASP3, CASP7 and CASP9. Can inhibit the autocleavage of pro-CASP9 and cleavage of pro-CASP3 by CASP9. Capable of inhibiting CASP9 autoproteolysis at 'Asp-315' and decreasing the rate of auto proteolysis at 'Asp-330'. Acts as a mediator of neuronal survival in pathological conditions. Prevents motor-neuron

	apoptosis induced by a variety of signals. Possible role in the prevention of spinal muscular atrophy that seems to be caused by inappropriate persistence of motor- neuron apoptosis: mutated or deleted forms of NAIP have been found in individuals with severe spinal muscular atrophy.
Tissue Location	Expressed in motor neurons, but not in sensory neurons. Found in liver and placenta, and to a lesser extent in spinal cord

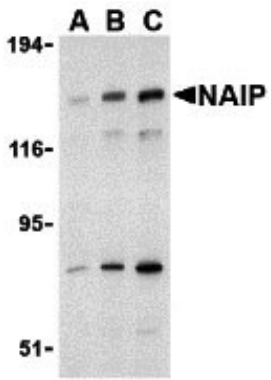
Background

NAIP Antibody: Neuronal apoptosis inhibitor protein (NAIP) was the first human inhibitor of apoptosis protein (IAP) identified and was discovered by its association with the neurodegenerative disorder spinal muscular atrophy. Members of the IAP family contain one to three copies of an approximately 70 amino acid motif termed baculovirus IAP repeat (BIR); these BIRs promote protein-protein interactions with various caspases such as caspase-3, -7, and -9 as well as members of the TRAF family of signal molecules. Unlike other IAPs however, NAIP requires ATP to bind caspase-9 and is not inhibited by the IAP-inhibiting molecule Smac/DIABLO, suggesting that NAIP is unique among the IAPs in its regulation of its activity. Finally, although only one human NAIP protein has been identified, other shorter NAIP mRNA transcripts have been reported.

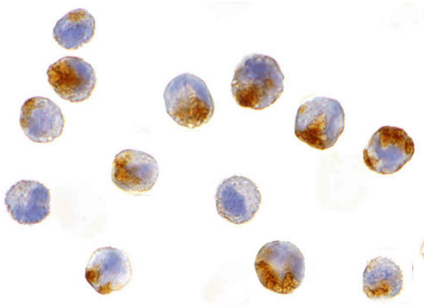
References

Roy N, Mahadevan MS, McLean M, et al. The gene for neuronal apoptosis inhibitory protein is partially deleted in individuals with spinal muscular atrophy. Cell 1995; 80:167-78.
Liston P, Fong WG, Korneluk RG. The inhibitors of apoptosis: there is more to life than Bcl2. Oncogene 2003; 22:8568-80.
Verhagen AM, Coulson EJ, and Vaux DL. Inhibitor of apoptosis proteins and their relatives: IAPs and other BIRPs. Genome Biol. 2001; 2:reviews3009.1-reviews3009.10.
Davoodi J, Lin L, Kelly J, et al. Neuronal apoptosis-inhibitory protein does not interact with Smac and requires ATP to bind caspase-9. J. Biol. Chem. 2004; 279:40622-8.

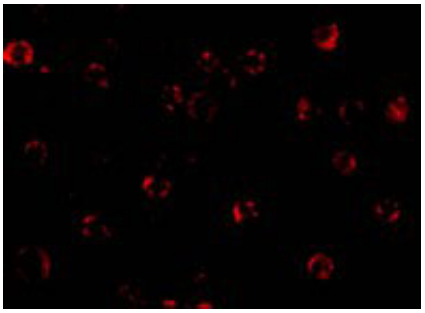
Images



Western blot analysis of NAIP in PC-3 cell lysate with NAIP antibody at (A) 0.5, (B) 1, and (C) 2 µg/mL.



Immunocytochemistry of NAIP in A549 cells with NAIP antibody at 10 µg/mL.



Immunofluorescence of NAIP in A549 cells with NAIP antibody at 20 µg/mL.