10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Akirin2 Antibody

Catalog # ASC10767

Product Information

Application	WB, E
Primary Accession	Q53H80
Other Accession	EAW48578, 119568963
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	22496
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Akirin2 antibody can be used for detection of Akirin2 by Western blot at 1 g/mL.

Additional Information

Gene ID	55122
Other Names	Akirin-2, AKIRIN2, C6orf166
Target/Specificity	AKIRIN2;
Reconstitution & Storage	Akirin2 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	Akirin2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	AKIRIN2 {ECO:0000303|PubMed:18066067, ECO:0000312|HGNC:HGNC:21407}
Function	Molecular adapter that acts as a bridge between a variety of multiprotein complexes, and which is involved in embryonic development, immunity, myogenesis and brain development (PubMed:34711951). Plays a key role in nuclear protein degradation by promoting import of proteasomes into the nucleus: directly binds to fully assembled 20S proteasomes at one end and to nuclear import receptor IPO9 at the other end, bridging them together and mediating the import of pre-assembled proteasome complexes through the nuclear pore (PubMed:34711951). Involved in innate immunity by regulating the production of interleukin-6 (IL6) downstream of Toll-like receptor (TLR): acts by bridging the NF-kappa-B inhibitor NFKBIZ and the SWI/SNF complex,

	leading to promote induction of IL6 (By similarity). Also involved in adaptive immunity by promoting B-cell activation (By similarity). Involved in brain development: required for the survival and proliferation of cerebral cortical progenitor cells (By similarity). Involved in myogenesis: required for skeletal muscle formation and skeletal development, possibly by regulating expression of muscle differentiation factors (By similarity). Also plays a role in facilitating interdigital tissue regression during limb development (By similarity).
Cellular Location	Nucleus. Cytoplasm {ECO:0000250|UniProtKB:B1AXD8} Membrane {ECO:0000250|UniProtKB:B1AXD8}. Note=Present mainly in the nuclear fraction, and at much lower level in the cytoplasmic and membrane fractions. {ECO:0000250|UniProtKB:B1AXD8}
Tissue Location	Widely expressed with the highest expression in peripheral blood leukocytes.

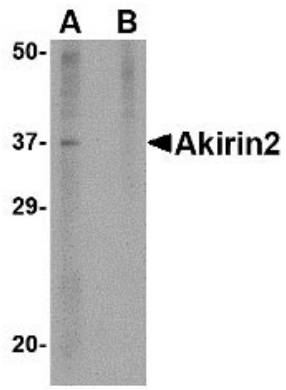
Background

Akirin2 Antibody: The highly conserved, nuclear-localized Akirin1 and Akirin2 proteins critically regulate the transcription of NF-κB-dependent genes and are required for defense against Gram-negative bacteria in the immune deficiency and NF-κB pathways. Akirin1 is dispensable in the mouse, and neither knockout mice nor cells derived from them have obvious distinctive phenotypes. In contrast, Akirin2 is required for development in the mouse and knockout of both Akirin homologs in mice show that Akirin2 is required downstream of toll-like receptor (TLR), TNF-α and IL-1β signaling, and for the production of IL-6. Akirin2 is functionally closer to the single gene in Drosophila, as the homozygous null D. melanogaster Akirin mutants show a similar, mid-to-early embryonic death.

References

Goto A, Matsushita K, Gesellchen V, et al. Akirins are highly conserved nuclear proteins required for NF-kappaB-dependent gene expression in drosophila and mice. Nat. Immunol.2008; 9:97-104.
Beutler B and Moresco EM. Akirins versus infection. Nat. Immunol.2008; 9:7-9.
Sutterwala FS and Flavell RA. Immunology: cascade into clarity. Nature2008; 451:254-5.
Tanji T and Ip YT. Regulators of the Toll and Imd pathways in the Drosophila innate immune response. Trends Immunol.2005; 26:193-8.

Images



Western blot analysis of Akirin2 in mouse brain tissue lysate with Akirin2 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.