Datasheet for ABIN1387749

anti-IRAK1 antibody (AA 301-400)

1 Validation

2 Images

Go to Product page

Overview

Quantity:	100 µL
Target:	IRAK1
Binding Specificity:	AA 301-400
Reactivity:	Human, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This IRAK1 antibody is un-conjugated
Application:	ELISA, Flow Cytometry (FACS), Immunofluorescence (Cultured Cells) (IF (cc)), Immunofluorescence (Paraffin-embedded Sections) (IF (p)), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	KLH conjugated synthetic peptide derived from human IRAK1
Isotype:	IgG
Cross-Reactivity:	Human, Rat
Predicted Reactivity:	Mouse,Dog,Cow,Pig,Chicken,Rabbit
Purification:	Purified by Protein A.

Target Details

Target:	IRAK1

Target Details

Alternative Name:	IRAK1 (IRAK1 Products)
Background:	Synonyms: IRAK, pelle, Interleukin-1 receptor-associated kinase 1, IRAK-1, IRAK1 Background: Serine/threonine-protein kinase that plays a critical role in initiating innate immune response against foreign pathogens. Involved in Toll-like receptor (TLR) and IL-1R signaling pathways. Is rapidly recruited by MYD88 to the receptor-signaling complex upon TLR activation. Association with MYD88 leads to IRAK1 phosphorylation by IRAK4 and subsequent autophosphorylation and kinase activation. Phosphorylates E3 ubiquitin ligases Pellino proteins (PELI1, PELI2 and PELI3) to promote pellino-mediated polyubiquitination of IRAK1. Then, the ubiquitin-binding domain of IKBKG/NEMO binds to polyubiquitinated IRAK1 bringing together the IRAK1-MAP3K7/TAK1-TRAF6 complex and the NEMO-IKKA-IKKB complex. In turn, MAP3K7/TAK1 activates IKKs (CHUK/IKKA and IKBKB/IKKB) leading to NF-kappa-B nuclear translocation and activation. Alternatively, phosphorylates TIRAP to promote its ubiquitination and subsequent degradation. Phosphorylates the interferon regulatory factor 7 (IRF7) to induce its activation and translocation to the nucleus, resulting in transcriptional activation of type I IFN genes, which drive the cell in an antiviral state. When sumoylated, translocates to the nucleus and phosphorylates STAT3.
Gene ID:	3654
UniProt:	P51617
Pathways:	NF-kappaB Signaling, TLR Signaling, Neurotrophin Signaling Pathway, Activation of Innate immune Response, Cellular Response to Molecule of Bacterial Origin, Toll-Like Receptors Cascades

Application Details

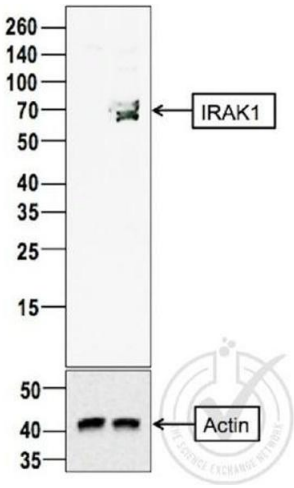
Application Notes:	ELISA 1:500-1000
	FCM 1:20-100
	IHC-P 1:200-400
	IHC-F 1:100-500
	IF(IHC-P) 1:50-200
	IF(IHC-F) 1:50-200
	IF(ICC) 1:50-200

Restrictions:	For Research Use only

Handling

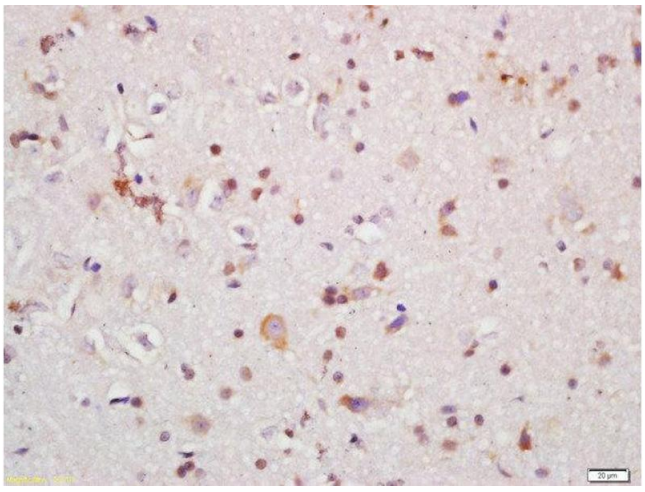
Format:	Liquid
Concentration:	1 µg/µL
Buffer:	0.01M TBS(pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.
Expiry Date:	12 months

Validation report #029809 for Western Blotting (WB)



Western Blotting

Image 1. Image provided by the Independent Validation Program (badge number 29809). Lane 1: c6/36 mosquito cell extract (non-reactive species), Lane 2: PC3 cell extract probed with Rabbit Anti-IRAK1 Polyclonal Antibody, Unconjugated at 1:100 overnight at 4˚C. Followed by conjugation to secondary antibody at 1:10000 for 60 min at 26˚C.



Immunohistochemistry (Paraffin-embedded Sections)

Image 2. Formalin-fixed and paraffin embedded rat brain labeled with Rabbit Anti-IRAK1 Polyclonal Antibody, Unconjugated (ABIN1387749) at 1:200 followed by conjugation to the secondary antibody and DAB staining

Validation report #029809 for Western Blotting (WB)

Successfully validated (Western Blotting (WB))

by Alamo Laboratories Inc

Report Number: 029809

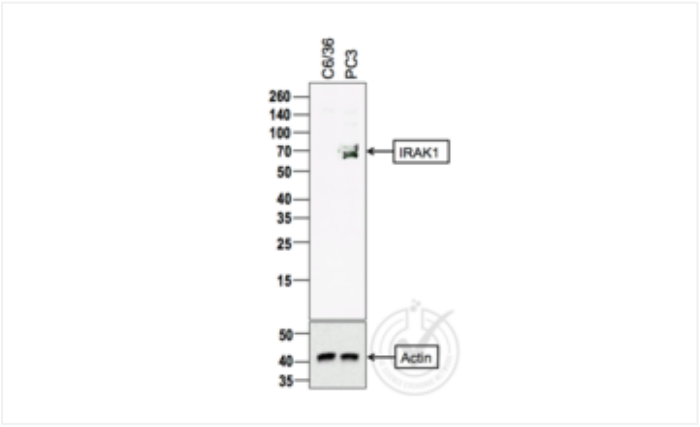
Date: Sep 03 2014

Lot Number:	140120
Method validated:	Western Blotting (WB)
Positive Control:	PC3 cells
Negative Control:	C6/36 cells (non-reactive species)
Notes:	A band was observed in the positive control sample at the correct molecular weight, which was absent from the negative control sample. Additional bands were also observed in the positive control sample, which were absent from the negative control. These bands may represent alternative IRAK1 isoforms.
Primary Antibody:	- Antigen: Interleukin-1 Receptor-Associated Kinase 1 (IRAK1) - Catalog number: ABIN1387749 - Supplier: Bioss - Supplier catalog number: bs-6464R - Lot number: 140120 - Antibody Dilution: 1:100
Secondary Antibody:	- Antigen: Goat Anti-Rabbit IgG (H + L)-HRP Conjugate - Supplier: Bio-Rad - Catalog number: #170-6515 - Lot number: L170-6515 - Antibody Dilution: 1:10,000
Controls:	• Positive control: PC3 cells • Negative control: C6/36 cells
Protocol:	• 1. The cell extracts were heated at 95°C for 5 minutes in 1X SDS Sample Buffer containing 1% SDS and 1.25% β-mercaptoethanol. • 2. 15 µl of heated culture-media were loaded and resolved on 8-16% SDS-polyacrylamide gel. • 3. The Thermo Scientific - Spectra Multicolor Broad Range (Cat # 26634) were used as molecular mass markers. • 4. Proteins were then transferred onto PVDF membrane by wet transfer and protein transfer was confirmed with Ponceau-S staining. • 5. The PVDF membrane was incubated with 25 ml of blocking buffer [Tris Buffered Saline, pH 7.4 plus 0.1% TW20 (TBST)] containing 5% (W/V) BSA at room temperature for 1 hour. • 6. The membrane was rinsed with TBST once. • 7. The membrane was immersed with the protein side up in the primary antibody solution in TBST containing 5% (W/V) BSA and incubated for 24 hours at 4°C. • 8. The membrane was rinsed in TBST thrice for 5 minutes each.

- 9. The membrane was incubated in the HRP-conjugated secondary antibody solution in TBST containing 5% (W/V) BSA and incubated for 1 hour at room temperature (~26°C) with gentle agitation.
- 10. The membrane was rinsed thrice TBST thrice for 5 minutes each.
- 11. The membrane was rinsed in TBS twice for 30 seconds each.
- 12. Signals were detected with ECL-2 Substrate. The blot was scanned for 45 minutes.
- 13. The membrane was rinsed three times TBST.
- 14. Incubated in Acidic Glycine Stripping Buffer at room temperature with gentle agitation for 3 times, 10 minutes each.
- 15. The membrane was washed in TBST 2 times for 10 minutes each.
- 16. Repeated Steps 5-12 with the loading control antibody (for Anti-actin) and its matching secondary antibody.

Experimental Notes:	- No experimental challenges noted.

Image for Validation report #029809



Validation image no. 1 for anti-Interleukin-1 Receptor-Associated Kinase 1 (IRAK1) (AA 301-400) antibody (ABIN1387749)

Figure 1: Western Blot for IRAK1. Arrowhead indicates the expected molecular weight of ~78 kDa.