


Product datasheet

Anti-PIAS1 antibody **ab32219**

★★★★☆ [6 Abreviews](#) [15 References](#) [5 Images](#)

Overview

Product name	Anti-PIAS1 antibody
Description	Rabbit polyclonal to PIAS1
Host species	Rabbit
Tested applications	Suitable for: ICC/IF, WB
Species reactivity	Reacts with: Mouse, Human, Recombinant fragment Predicted to work with: Rat, Chicken, Dog, Xenopus laevis 
Immunogen	Synthetic peptide corresponding to Human PIAS1 aa 500-600. (Peptide available as ab32218)
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab32219 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★ (1)	Use a concentration of 1 µg/ml.
WB	★★★★★ (3)	1/500 - 1/2000. Detects a band of approximately 81 kDa (predicted molecular weight: 72 kDa).

Target

Function

Functions as an E3-type small ubiquitin-like modifier (SUMO) ligase, stabilizing the interaction between UBE2I and the substrate, and as a SUMO-tethering factor. Plays a crucial role as a transcriptional coregulation in various cellular pathways, including the STAT pathway, the p53 pathway and the steroid hormone signaling pathway. In vitro, binds A/T-rich DNA. The effects of this transcriptional coregulation, transactivation or silencing, may vary depending upon the biological context. Together with PRMT1, may repress STAT1 transcriptional activity, in the late phase of interferon gamma (IFN-gamma) signaling.

Tissue specificity

Expressed in numerous tissues with highest level in testis.

Pathway

Protein modification; protein sumoylation.

Sequence similarities

Belongs to the PIAS family.
Contains 1 PINIT domain.
Contains 1 SAP domain.
Contains 1 SP-RING-type zinc finger.

Domain

The LXXLL motif is a transcriptional coregulator signature.
The SP-RING-type domain is required for promoting EKLF sumoylation.

Post-translational modifications

Sumoylated.
Dimethylated by PRMT1 at Arg-303 in the late phase of interferon gamma (IFN-gamma) signaling, leading to preferential interaction with STAT1 and thus resulting in release of STAT1 from its target gene.

Cellular localization

Nucleus speckle. Interaction with CSRP2 may induce a partial redistribution along the cytoskeleton.

Images



Western blot - Anti-PIAS1 antibody (ab32219)

This image is courtesy of an Abreview submitted by Mn young Kim

All lanes : Anti-PIAS1 antibody (ab32219) at 1/2500 dilution
(Incubation for 1 hour at 25°C.)

Lane 1 : 293T cell lysate

Lane 2 : MEL cell lysate

Lane 3 : K562 cell lysate

Lysates/proteins at 25 µg per lane.

Secondary

All lanes : Donkey Anti-Rabbit IgG H&L (HRP) (**ab6802**) at 1/20000 dilution

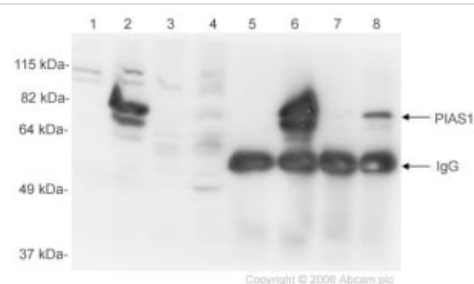
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 72 kDa

Observed band size: 71 kDa

Exposure time: 1 minute



Western blot - Anti-PIAS1 antibody (ab32219)

All lanes : Anti-PIAS1 antibody (ab32219) at 1/1000 dilution

Lane 1 : HeLa whole cell lysate at 25 µg

Lane 2 : HeLa whole cell extract with transfected PIAS1 at 25 µg

Lane 3 : HeLa nuclear extract at 25 µg

Lane 4 : T47D nuclear extract

at 25 µg

Lane 5 : HeLa whole cell lysate immunoprecipitated with ab32219

Lane 6 : HeLa whole cell extract with transfected PIAS1

immunoprecipitated with ab32219

Lane 7 : HeLa nuclear extract immunoprecipitated with ab32219

Lane 8 : T47D nuclear extract immunoprecipitated with ab32219

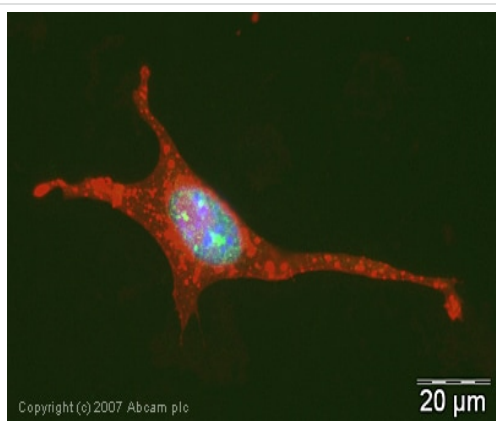
Performed under reducing conditions.

Predicted band size: 72 kDa

Observed band size: 81 kDa

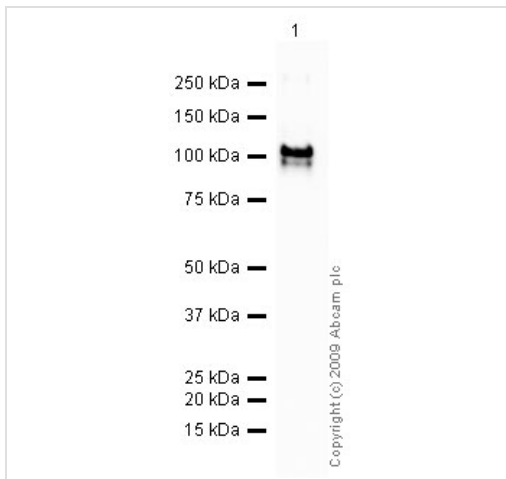
Additional bands at: 110 kDa, 79 kDa (possible cleavage fragment), 79 kDa (possible cross reactivity). We are unsure as to the identity of these extra bands.

ab32219 was used in western blot analysis using HeLa whole cell lysate, HeLa nuclear lysate and T47D nuclear lysate. It was unable to detect endogenous PIAS1 in these lysates. It was able to detect PIAS1 in cells that are overexpressing the protein, running at a molecular weight of approximately 81 kDa, suggesting that the amount of endogenous PIAS1 in these cells is very low. When ab32219 was used to immunoprecipitate the PIAS1 from these extracts, the protein could then be detected by western blot in the overexpressing HeLa extract as well as the T47D nuclear extract. For immunoprecipitations, 25ug of extract was used in the IP, and 10% of the sample was run on the gel.



Immunocytochemistry/ Immunofluorescence - Anti-PIAS1 antibody (ab32219)

ICC/IF image of ab32219 stained MEF1 cells. The cells were methanol fixed (5 min), permeabilised in TBS-T (20 min) and incubated with the antibody (ab32219, 1μg/ml) for 1h at room temperature. 1%BSA / 10% normal serum / 0.3M glycine was used to quench autofluorescence and block non-specific protein-protein interactions. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red). DAPI was used to stain the cell nuclei (blue).



Western blot - Anti-PIAS1 antibody (ab32219)

Anti-PIAS1 antibody (ab32219) at 1 µg/ml + PIAS1 - Recombinant Protein at 0.1 µg

Secondary

Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

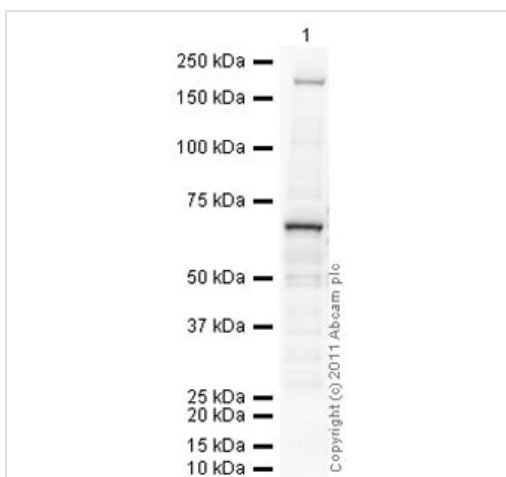
Performed under reducing conditions.

Predicted band size: 72 kDa

Observed band size: 100 kDa

Exposure time: 2 minutes

ab32219 recognizes the full length tagged recombinant protein which has an ex



Western blot - Anti-PIAS1 antibody (ab32219)

Anti-PIAS1 antibody (ab32219) at 1 µg/ml + Human testis tissue lysate - total protein ([ab30257](#)) at 10 µg

Secondary

Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (HRP), pre-adsorbed at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 72 kDa

Observed band size: 72 kDa

Additional bands at: 180 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 4 minutes

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