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PIAS1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1243a

Specification

PIAS1 Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	O75925
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**71836**
Antigen Region	**607-637**

PIAS1 Antibody (C-term) - Additional Information

Gene ID 8554

Other Names
E3 SUMO-protein ligase PIAS1, 632-, DEAD/H box-binding protein 1, Gu-binding protein, GBP, Protein inhibitor of activated STAT protein 1, RNA helicase II-binding protein, PIAS1, DDXBP1

Target/Specificity
This PIAS1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 607-637 amino acids from the C-terminal region of human PIAS1.

Dilution
WB~~1:1000
IHC-P~~1:50~100

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PIAS1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

PIAS1 Antibody (C-term) - Protein Information

Name PIAS1

Synonyms DDXBP1

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. Sumoylates PML (at'Lys-65' and 'Lys-160') and PML-RAR and promotes their ubiquitin-mediated degradation. PIAS1-mediated sumoylation of PML promotes its interaction with CSNK2A1/CK2 which in turn promotes PML phosphorylation and degradation (By similarity). Enhances the sumoylation of MTA1 and may participate in its paralog-selective sumoylation. Plays a dynamic role in adipogenesis by promoting the SUMOylation and degradation of CEBPB (By similarity). Mediates the nuclear mobility and localization of MSX1 to the nuclear periphery, whereby MSX1 is brought into the proximity of target myoblast differentiation factor genes (By similarity). Also required for the binding of MSX1 to the core enhancer region in target gene promoter regions, independent of its sumolyation activity (By similarity). Capable of binding to the core enhancer region TAAT box in the MYOD1 gene promoter (By similarity).

Cellular Location
Nucleus {ECO:0000250|UniProtKB:O88907}. Nucleus speckle Nucleus, PML body {ECO:0000250|UniProtKB:O88907}. Cytoplasm, cytoskeleton. Note=Interaction with CSRP2 may induce a partial redistribution along the cytoskeleton (PubMed:11672422). Interaction with MSX1 is required for localization to the nuclear periphery (By similarity) {ECO:0000250|UniProtKB:O88907, ECO:0000269|PubMed:11672422}

Tissue Location
Expressed in numerous tissues with highest level in testis.

PIAS1 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PIAS1 Antibody (C-term) - Images

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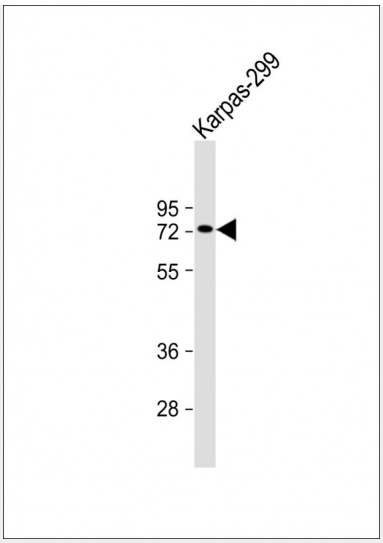
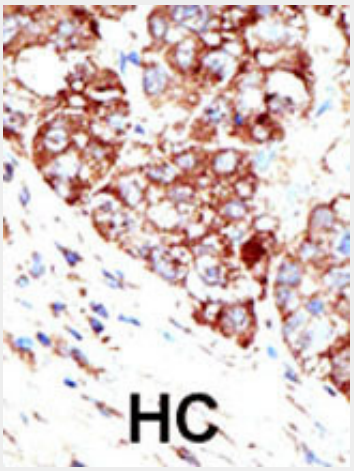


Anti-PIAS1 Antibody (R621) at 1:1000 dilution + Karpas-299 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 72 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

PIAS1 Antibody (C-term) - Background

PIAS1 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. This protein plays a crucial role in transcriptional coregulation of various cellular pathways, including the STAT pathway, the p53 pathway and the steroid hormone signaling pathway. It functions in testis as a nuclear receptor transcriptional coregulator and may have a role in androgen receptor initiation and maintenance of spermatogenesis. The effects of transcriptional coregulation, transactivation or silencing, may vary depending upon the biological context.

PIAS1 Antibody (C-term) - References

Miyauchi, Y., et al., J. Biol. Chem. 277(51):50131-50136 (2002).
Nishida, T., et al., J. Biol. Chem. 277(44):41311-41317 (2002).
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Liu, B., et al., J. Biol. Chem. 276(39):36624-36631 (2001).