

PIAS1 Antibody (C-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS13571**Specification**

PIAS1 Antibody (C-Terminus) - Product Information

Application	WB, IHC-P, IF, E
Primary Accession	075925
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	72kDa KDa
Dilution	WB~~1:1000 IHC-P~~N/A IF~~1:50~200 E~~N/A

PIAS1 Antibody (C-Terminus) - Additional Information**Gene ID** 8554**Other Names**

E3 SUMO-protein ligase PIAS1, 6.3.2.-, 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

Human PIAS1

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions

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

PIAS1 Antibody (C-Terminus) - 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 (PubMed:11583632, PubMed:11867732, PubMed:14500712, PubMed:21965678, PubMed:36050397). Catalyzes sumoylation of various proteins, such as CEBPB, MRE11, MTA1, PTK2 and PML (PubMed:11583632, PubMed:11867732, PubMed:14500712, PubMed:21965678, PubMed:36050397). 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 (PubMed:11583632, PubMed:11867732). In vitro, binds A/T-rich DNA (PubMed:15133049). The effects of this transcriptional coregulation, transactivation or silencing, may vary depending upon the biological context (PubMed:11583632, PubMed:11867732, PubMed:14500712, PubMed:21965678, PubMed:36050397). Mediates sumoylation of MRE11, stabilizing MRE11 on chromatin during end resection (PubMed:36050397). Sumoylates PML (at 'Lys-65' and 'Lys-160') and PML-RAR and promotes their ubiquitin-mediated degradation (By similarity). 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 (PubMed:21965678). 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 sumoylation 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

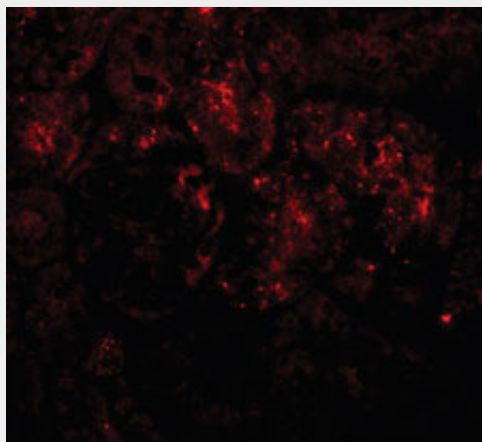
Expressed in numerous tissues with highest level in testis.

PIAS1 Antibody (C-Terminus) - Protocols

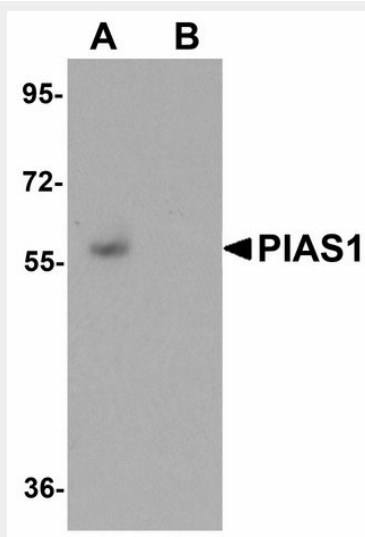
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

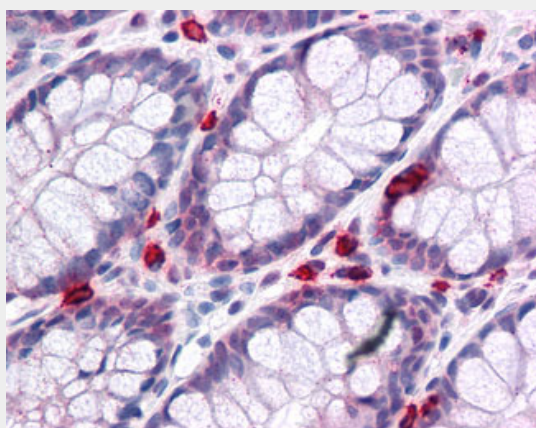
PIAS1 Antibody (C-Terminus) - Images



Immunofluorescence of PIAS1 in rat kidney tissue with PIAS1 antibody at 20 ug/ml.



Western blot of PIAS1 in human kidney tissue lysate with PIAS1 antibody at 1 ug/ml in (A) the...



Anti-PIAS1 antibody IHC of human colon.

PIAS1 Antibody (C-Terminus) - Background

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. 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.

PIAS1 Antibody (C-Terminus) - References

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Tan J.,et al.Mol. Endocrinol. 14:14-26(2000).
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Zody M.C.,et al.Nature 440:671-675(2006).