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

PIAS2 Antibody
Catalog # ASC11125

Specification

PIAS2 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	O75928
Other Accession	EAX01485, 119621890
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**PIAS2 antibody can be used for detection of PIAS2 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

PIAS2 Antibody - Additional Information

Gene ID	**9063**

Target/Specificity
PIAS2;

Reconstitution & Storage
PIAS2 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
PIAS2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PIAS2 Antibody - Protein Information

Name PIAS2

Synonyms PIASX

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 coregulator in various cellular pathways, including the STAT pathway, the p53 pathway and the steroid hormone signaling pathway. The effects of this transcriptional coregulation, transactivation or silencing may vary depending upon the biological context and the PIAS2 isoform studied. However, it seems to be mostly involved in gene silencing. Binds to sumoylated ELK1 and enhances its transcriptional activity by preventing recruitment of HDAC2 by ELK1, thus reversing SUMO-mediated repression of ELK1 transactivation activity. Isoform PIAS2-beta, but not isoform PIAS2-alpha, promotes MDM2 sumoylation. Isoform PIAS2-alpha

promotes PARK7 sumoylation. Isoform PIAS2-beta promotes NCOA2 sumoylation more efficiently than isoform PIAS2-alpha. Isoform PIAS2-alpha sumoylates PML at'Lys-65' and 'Lys-160'.

Cellular Location
Nucleus speckle {ECO:0000250|UniProtKB:Q8C5D8}. Nucleus, PML body. Nucleus. Note=Colocalizes at least partially with promyelocytic leukemia nuclear bodies (PML NBs) (PubMed:22406621) Colocalizes with SUMO1 in nuclear granules (By similarity) {ECO:0000250|UniProtKB:Q8C5D8, ECO:0000269|PubMed:22406621}

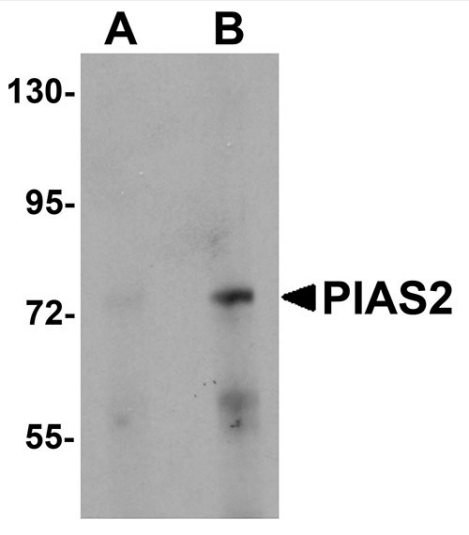
Tissue Location
Mainly expressed in testis. Isoform 3 is expressed predominantly in adult testis, weakly in pancreas, embryonic testis and sperm, and at very low levels in other organs

PIAS2 Antibody - Protocols

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

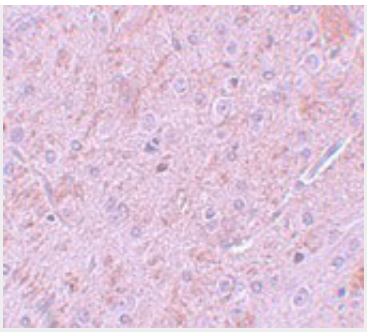
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PIAS2 Antibody - Images

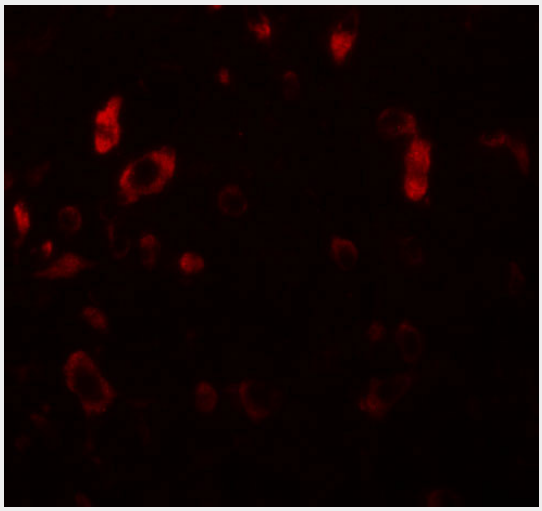


Western blot analysis of PIAS2 in rat brain tissue lysate with PIAS2 antibody at (A) 1 and (B) 2 µg/mL.

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



Immunohistochemistry of PIAS2 in rat brain tissue with PIAS2 antibody at 5 µg/mL.



Immunofluorescence of PIAS2 in rat brain tissue with PIAS2 antibody at 20 µg/mL.

PIAS2 Antibody - Background

PIAS2 Antibody: The PIAS (protein inhibitor of activated STAT) proteins play a crucial role as transcriptional coregulators in various cellular pathways, including the STAT, p53 and the steroid hormone signaling pathway. The PIAS protein family includes at least five evolutionarily conserved genes, including PIAS2. The major function of the PIAS proteins is the control of gene transcription and can also act as small ubiquitin-like-modifier (SUMO) E3 ligases. PIAS2 binds specifically to STAT4 following IL-12 stimulation and inhibits STAT4-mediated gene activation in human T cells. PIAS2 is a potent transcriptional activator of Bcl-2, but together with Bcl-6 can suppress the expression of Bcl-2.

PIAS2 Antibody - References

Shuai K and Liu B. Regulation of gene-activation pathways by PIAS proteins in the immune system. Nat. Rev. Immunol.2005; 5:593-605.
Arora T, Liu B, He H, et al. PIASx is a transcriptional co-repressor of signal transducer and activator of transcription 4. J. Biol. Chem.2003; 278:21327-30.
Patel JH and McMahon SB. BCL2 is a downstream effector of MIZ-1 essential for blocking c-MYC-induced apoptosis. J. Biol. Chem.2007; 282:5-13.
Saito M, Novak U, Piovan E, et al. BCL6 suppression of BCL2 via Miz1 and its disruption in diffuse large B cell lymphoma. Proc. Natl. Acad. Sci. USA2009; 106:11294-9.