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PIAS2 (PIASx1/2) Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1246a

Specification

PIAS2 (PIASx1/2) Antibody (N-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	O75928
Other Accession	Q6AZ28, Q8C5D8
Reactivity	**Human**
Predicted	**Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**68240**
Antigen Region	**109-140**

PIAS2 (PIASx1/2) Antibody (N-term) - Additional Information

Gene ID 9063

Other Names
E3 SUMO-protein ligase PIAS2, 632-, Androgen receptor-interacting protein 3, ARIP3, DAB2-interacting protein, DIP, Msx-interacting zinc finger protein, Miz1, PIAS-NY protein, Protein inhibitor of activated STAT x, Protein inhibitor of activated STAT2, PIAS2, PIASX

Target/Specificity
This PIAS2 (PIASx1/2) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 109-140 amino acids from the N-terminal region of human PIAS2 (PIASx1/2).

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
PIAS2 (PIASx1/2) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

PIAS2 (PIASx1/2) Antibody (N-term) - 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 (PIASx1/2) Antibody (N-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

PIAS2 (PIASx1/2) Antibody (N-term) - Images

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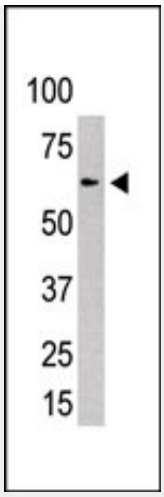
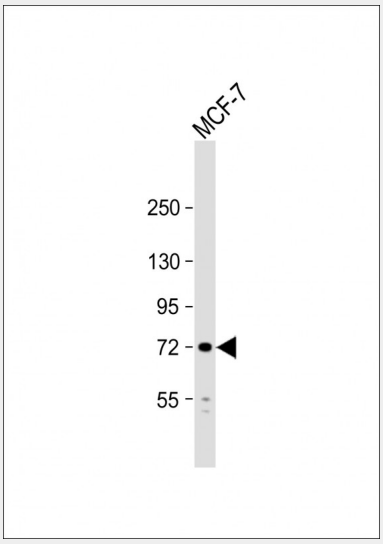
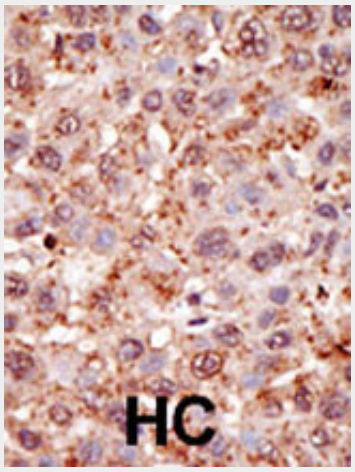


Western blot analysis of PIASx1/2 polyclonal antibody (Cat. #AP1246a) in Y79 cell lysate. PIASx1/2 (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Anti-PIASx1/2 Antibody (Q115) at 1:1000 dilution + MCF-7 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 : 68 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.

PIAS2 (PIASx1/2) Antibody (N-term) - Background

PIASX 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 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. PIASX 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.

PIAS2 (PIASx1/2) Antibody (N-term) - References

Arora, T., et al., J. Biol. Chem. 278(24):21327-21330 (2003).
Wu, S., et al., Oncogene 22(3):351-360 (2003).
Liu, B., et al., Proc. Natl. Acad. Sci. U.S.A. 95(18):10626-10631 (1998).
Wu, L., et al., Mech. Dev. 65 (1-2), 3-17 (1997).