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PIAS3 Antibody

Catalog # ASC11126

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9Y6X2
Other Accession	NP_006090, 115298686
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	68017
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PIAS3 antibody can be used for detection of PIAS3 by Western blot at 1 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	10401
Other Names	E3 SUMO-protein ligase PIAS3, 6.3.2.-, Protein inhibitor of activated STAT protein 3, PIAS3
Target/Specificity	PIAS3;
Reconstitution & Storage	PIAS3 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	PIAS3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PIAS3
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 and the steroid hormone signaling pathway. Involved in regulating STAT3 signaling via inhibiting STAT3 DNA-binding and suppressing cell growth. Enhances the sumoylation of MTA1 and may participate in its paralog-selective sumoylation (PubMed:21965678, PubMed:9388184). Sumoylates CCAR2 which promotes its interaction with SIRT1 (PubMed:25406032). Diminishes the sumoylation of

	ZFHX3 by preventing the colocalization of ZFHX3 with SUMO1 in the nucleus (PubMed:24651376).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:O54714}. Nucleus {ECO:0000250|UniProtKB:O54714}. Nucleus speckle {ECO:0000250|UniProtKB:O54714}. Note=Colocalizes with MITF in the nucleus. Colocalizes with GFI1 in nuclear dots. Colocalizes with SUMO1 in nuclear granules. {ECO:0000250|UniProtKB:O54714}
Tissue Location	Widely expressed..

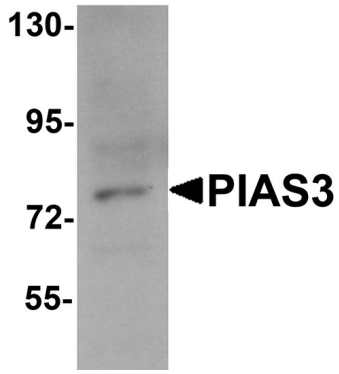
Background

PIAS3 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 PIAS3. 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. PIAS3 binds specifically to STAT3 following the stimulation of STAT3. Increased expression of PIAS3 has been observed in several human cancers, including lung, breast, and brain tumors, but not in anaplastic lymphoma kinase-positive T/null-cell lymphomas, indicating that PIAS3 plays multiple roles in different tissue and cell types.

References

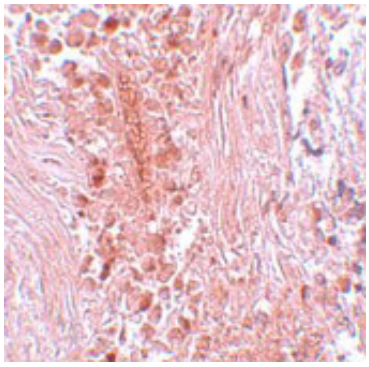
Shuai K and Liu B. Regulation of gene-activation pathways by PIAS proteins in the immune system. Nat. Rev. Immunol.2005; 5:593-605.
Chung CD, Liao J, Liu B, et al. Specific inhibition of Stat3 signal transduction by PIAS3. Science1997; 278:1803-5.
Wang L and Banerjee S. Differential PIAS3 expression in human malignancy. Oncol. Rep.2004; 11:1319-24.
Zhang Q, Raghunath PN, Xue L, et al. Multilevel dysregulation of STAT3 activation in anaplastic lymphoma kinase-positive T/null-cell lymphoma. J. Immunol.2002; 168:466-7

Images



Western blot analysis of PIAS3 in K562 cell lysate with PIAS3 antibody at 1 µg/mL.

Immunohistochemistry of PIAS3 in human breast carcinoma tissue with PIAS3 antibody at 5 µg/mL.



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