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PIAS1 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP1242a

Specification

PIAS1 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession O75925

PIAS1 Antibody (N-term) Blocking Peptide - 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
The synthetic peptide sequence used to generate the antibody AP1242a was selected from the N-term region of human PIAS1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PIAS1 Antibody (N-term) Blocking Peptide - 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 (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

PIAS1 Antibody (N-term) Blocking Peptide - Images

PIAS1 Antibody (N-term) Blocking Peptide - 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 (N-term) Blocking Peptide - 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).Tan, J.A., et al., J. Biol. Chem. 277(19):16993-17001 (2002).Megidish, T., et al., J. Biol. Chem. 277(10):8255-8259 (2002).Liu, B., et al., J. Biol. Chem. 276(39):36624-36631 (2001).