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PIASy Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP1249a

Specification

PIASy Antibody (N-term) Blocking peptide - Product Information

Primary Accession Q8N2W9

PIASy Antibody (N-term) Blocking peptide - Additional Information

Gene ID 51588

Other Names
E3 SUMO-protein ligase PIAS4, 632-, PIASy, Protein inhibitor of activated STAT protein 4, Protein inhibitor of activated STAT protein gamma, PIAS-gamma, PIAS4, PIASG

Target/Specificity
The synthetic peptide sequence used to generate the antibody <a >AP1249a was selected from the N-term region of human PIASy1. 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.

PIASy Antibody (N-term) Blocking peptide - Protein Information

Name PIAS4 {ECO:0000303|PubMed:32832608, ECO:0000312|HGNC:HGNC:17002}

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:12511558, PubMed:12631292, PubMed:12727872, PubMed:15831457, PubMed:15976810, PubMed:22508508, PubMed:32832608). Mediates sumoylation of CEBPA, PARK7, HERC2, MYB, TCF4 and RNF168 (PubMed:12511558, PubMed:12631292, PubMed:<a

href="http://www.uniprot.org/citations/12727872" target="_blank">12727872, PubMed:15831457, PubMed:15976810, PubMed:22508508). Plays a crucial role as a transcriptional coregulation in various cellular pathways, including the STAT pathway, the p53/TP53 pathway, the Wnt pathway and the steroid hormone signaling pathway (PubMed:11388671). Involved in gene silencing (PubMed:11248056). In Wnt signaling, represses LEF1 and enhances TCF4 transcriptional activities through promoting their sumoylations (PubMed:12727872, PubMed:15831457). Enhances the sumoylation of MTA1 and may participate in its paralog-selective sumoylation (PubMed:21965678). Binds to AT-rich DNA sequences, known as matrix or scaffold attachment regions (MARs/SARs) (By similarity). Catalyzes conjugation of SUMO2 to KAT5 in response to DNA damage, facilitating repair of DNA double-strand breaks (DSBs) via homologous recombination (HR) (PubMed:32832608). Mediates sumoylation of PARP1 in response to PARP1 trapping to chromatin (PubMed:35013556).

Cellular Location
Nucleus, PML body Note=Colocalizes with SUMO1 and TCF7L2/TCF4 and LEF1 in a subset of PML (promyelocytic leukemia) nuclear bodies.

Tissue Location
Highly expressed in testis and, at lower levels, in spleen, prostate, ovary, colon and peripheral blood leukocytes

PIASy Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides

PIASy Antibody (N-term) Blocking peptide - Images

PIASy Antibody (N-term) Blocking peptide - Background

PIASy1 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, the wnt pathway and the steroid hormone signaling pathway. PIASy1 is involved in gene silencing, and promotes PARK7 sumoylation.

PIASy Antibody (N-term) Blocking peptide - References

Imoto, S., et al., J. Biol. Chem. 278(36):34253-34258 (2003).Chun, T.H., et al., Circ. Res. 92(11):1201-1208 (2003).Subramanian, L., et al., J. Biol. Chem. 278(11):9134-9141 (2003).Liu, B., et al., Proc. Natl. Acad. Sci. U.S.A. 98(6):3203-3207 (2001).Liu, B., et al., Proc. Natl. Acad. Sci. U.S.A. 95(18):10626-10631 (1998).