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Anti-PIAS1 Rabbit Monoclonal Antibody

Catalog # ABO15358

Product Information

Application	WB, IHC, IF, ICC, FC
Primary Accession	O75925
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-PIAS1 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

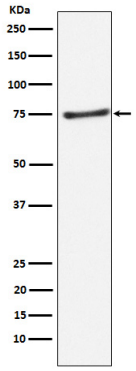
Gene ID	8554
Other Names	E3 SUMO-protein ligase PIAS1, 2.3.2.-, DEAD/H box-binding protein 1, E3 SUMO-protein transferase PIAS1, Gu-binding protein, GBP, Protein inhibitor of activated STAT protein 1, RNA helicase II-binding protein, PIAS1, DDXBP1
Calculated MW	71836
Application Details	WB 1:500-1:2000 IHC 1:50-1:200 ICC/IF 1:50-1:200 FC 1:100
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 19P34
Immunogen	A synthesized peptide derived from human PIAS1
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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 (PubMed:11583632, PubMed:11867732, PubMed:14500712, PubMed:15280358, PubMed:21965678, PubMed:36050397). Catalyzes sumoylation of various proteins, such as CEBPB, MRE11, MTA1, PTK2, PML and ZNF76 (PubMed:11583632, PubMed:11867732, PubMed:14500712, PubMed:15280358, PubMed:21965678, PubMed:36050397). 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 (PubMed:11583632, PubMed:11867732). In vitro, binds A/T-rich DNA (PubMed:15133049). The effects of this transcriptional coregulation, transactivation or silencing, may vary depending upon the biological context (PubMed:11583632, PubMed:11867732, PubMed:14500712, PubMed:21965678, PubMed:36050397). Mediates sumoylation of MRE11, stabilizing MRE11 on chromatin during end resection (PubMed:36050397). Sumoylates PML (at 'Lys-65' and 'Lys-160') and PML-RAR and promotes their ubiquitin-mediated degradation (By similarity). 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 (PubMed:21965678). 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 sumoylation 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.

Images



Western blot analysis of PIAS1 expression in Daudi cell lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.