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Anti-PIAS4 Antibody

Catalog # ABO11525

Product Information

Application	WB
Primary Accession	Q8N2W9
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for E3 SUMO-protein ligase PIAS4(PIAS4) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	51588
Other Names	E3 SUMO-protein ligase PIAS4, 2.3.2.27, PIASy, Protein inhibitor of activated STAT protein 4, Protein inhibitor of activated STAT protein gamma, PIAS-gamma, RING-type E3 ubiquitin transferase PIAS4, PIAS4, PIASG
Calculated MW	56504
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Nucleus, PML body . Colocalizes with SUMO1 and TCF7L2/TCF4 and LEF1 in a subset of PML (promyelocytic leukemia) nuclear bodies.
Tissue Specificity	Highly expressed in testis and, at lower levels, in spleen, prostate, ovary, colon and peripheral blood leukocytes. .
Source	Eukaryota
Protein Name	E3 SUMO-protein ligase PIAS4
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human PIAS4 (295-310aa HPELCKALVKEKLRLD), identical to the related mouse and rat sequences.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins

Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the PIAS family.

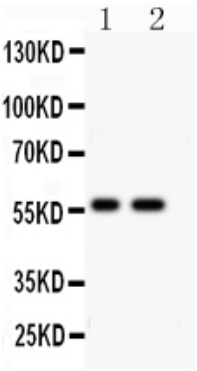
Protein Information

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 ALKBH5, AXIN1, CEBPA, KLF8, GATA2, PARK7, HERC2, MYB, TCF4 and RNF168 (PubMed:12223491, PubMed:12511558, PubMed:12631292, PubMed:12727872, PubMed:12750312, PubMed:15831457, PubMed:15976810, PubMed:16617055, PubMed:22508508, PubMed:34048572). 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). Mediates sumoylation of KLF8, repressing KLF8 transcriptional activity and cell cycle progression into G(1) phase (PubMed:16617055). Sumoylates ALKBH5 downstream of MAPK8/JNK1 and MAPK9/JNK2 in response to reactive oxygen species (ROS), inhibiting ALKBH5 RNA demethylase activity (PubMed:34048572).
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

Background

E3 SUMO-protein ligase PIAS4, also known as protein inhibitor of activated STAT protein 4(PIAS4) or protein inhibitor of activated STAT protein gamma(PIASg or PIASy) is an enzyme that in humans is encoded by the PIAS4 gene. This gene is mapped to 19p13.3. This gene 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. It 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 gene involved in gene silencing.

Images



Anti- PIAS4 antibody, ABO11525, Western blottingAll lanes: Anti PIAS4 (ABO11525) at 0.5ug/mlLane 1: Human Placenta Tissue Lysate at 50ugLane 2: A431 Whole Cell Lysate at 40ugPredicted bind size: 57KDObserved bind size: 57KD

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