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# Anti-PIAS4 Picoband Antibody

Catalog # ABO11700

## Product Information

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| **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

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| **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 NaN3. |
| **Immunogen** | A synthetic peptide corresponding to a sequence at the N-terminus of human PIAS4 (130-174aa EVRLVKLPFFNMLDELLKPTELVPQNNEKLQESPCIFALTPRQVE), different from the related mouse sequence by two amino acids. |
| **Purification** | Immunogen affinity purified. |
| **Cross Reactivity** | No cross reactivity with other proteins. |

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| **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. |

## Protein Information

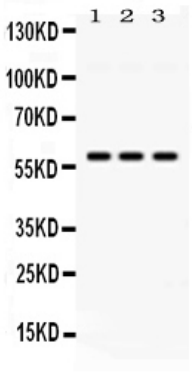
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| **Name** | PIAS4 {ECO:0000303\|PubMed:32832608, ECO:0000312\|HGNC:HGNC:17002} |
| **Function** | Functions as an E3-type small ubiquitin-like modifier (SUMO) ligase, stabilizing the interaction between UBE2I and the substrate, and as a SUMO-tethering 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 also 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

Western blot analysis of PIAS4 expression in rat testis extract (lane 1), mouse testis extract (lane 2) and HELA




whole cell lysates (lane 3). PIAS4 at 57KD was detected using rabbit anti- PIAS4 Antigen Affinity purified polyclonal antibody (Catalog # ABO11700) at 0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .

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