PIAS1 cDNA Clone – Protein Inhibitor of Activated STAT, 1 (Human)

PRODUCT OVERVIEW

Product Name	PIAS1, cDNA Clone
Full Product Name	PIAS1 cDNA Clone
Product Gene Name	PIAS1 cdna clone
Sequence	ATGGCGGACA GTGCGGAACT AAAGCAAATG GTTATGAGCC TTAGAGTTTC TGAACTCCAA GTACTGTTGG GCTACGCCGG GAGAAACAAG CACGGACGCA AACACGAACT TCTCACAAAA GCCCTGCATT TGCTAAAGGC TGGCTGTAGT CCTGCTGTGC AAATGAAAAT TAAGGAACTC TATAGGCGGC GGTTCCCACA GAAAATCATG ACGCCTGCAG ACTTGTCCAT CCCCAACGTA CATTCAAGTC CTATGCCAGC AACTTTGTCT CCATCTACCA TTCCACAACT CACTTACGAT GGTCACCCTG CATCATCGCC ATTACTCCCT GTTTCTCTTC TGGGACCTAA ACATGAACTG GAACTCCCAC ATCTTACATC AGCTCTTCAC CCAGTCCATC CGGATATAAA ACTTCAAAAA TTACCATTTT ATGATTTACT GGATGAACTG ATAAAACCCA CCAGTCTAGC ATCAGACAAC AGTCAGCGCT TTCGAGAAAC CTGTTTTGCA TTTGCCTTGA CACCACAACA AGTGCAGCAA ATCAGTAGTT CCATGGATAT TTCTGGGACC AAATGTGACT TCACAGTACA GGTCCAGTTA AGGTTTTGTT TATCAGAAAC CAGTTGTCCA CAAGAAGATC ACTTCCCACC CAATCTTTGT GTGAAAGTGA ATACAAAACC TTGCAGCCTT CCAGGTTACC TTCCACCTAC AAAAAATGGC GTGGAACCAA AGCGACCCAG CCGACCAATT AATATCACCT CACTTGTCCG ACTGTCCACA ACAGTACCAA ACACGATTGT TGTTTCTTGG ACTGCAGAAA TTGGAAGAAA CTATTCCATG GCAGTATATC TTGTAAAACA GTTGTCCTCA ACAGTTCTTC TTCAGAGGTT ACGAGCAAAG GGAATAAGGA ATCCGGATCA TTCTAGAGCT TTAATTAAAG AGAAGTTGAC TGCGGATCCA GACAGTGAAA TAGCTACAAC CAGCCTAAGG GTTTCTCTAC TATGTCCACT TGGTAAAATG CGGCTGACAA TTCCGTGTCG GGCCCTTACA TGTTCTCATC TACAATGTTT TGACGCAACT CTTTACATTC AGATGAATGA GAAAAAACCA ACCTGGGTTT GTCCTGTCTG TGATAAGAAG GCTCCATATG AACACCTTAT TATTGATGGC TTGTTTATGG AAATCCTAAA GTACTGTACA GACTGTGATG AAATACAATT TAAGGAGGAT GGCACTTGGG CACCGATGAG ATCAAAAAAG GAAGTACAGG AAGTTTCTGC CTCTTACAAT GGAGTCGATG GATGCTTGAG CTCCACATTG GAGCATCAGG TAGCGTCTCA CCACCAGTCC TCAAATAAAA ACAAGAAAGT AGAAGTGATT GACCTAACCA TAGACAGTTC ATCTGATGAA GAGGAAGAAG AGCCATCTGC CAAGAGGACC TGTCCTTCCC TATCTCCCAC ATCACCACTA AATAATAAAG GCATTTTAAG TCTTCCACAT CAAGCATCTC CAGTATCCCG CACCCCAAGC CTTCCTGCTG TAGACACAAG CTACATTAAT ACCTCCCTCA TCCAAGACTA TAGGCATCCT TTCCACATGA CACCCATGCC TTACGACTTA CAAGGATTAG ATTTCTTTCC TTTCTTATCA GGAGACAATC AGCATTACAA CACCTCCTTG CTTGCCGCTG CAGCAGCAGC AGTTTCAGAT GATCAAGACC TCCTACACTC GTCTCGGTTT TTCCCGTATA CCTCCTCACA GATGTTTCTT GATCAGTTAA GTGCAGGAGG CAGTACTTCT CTGCCAACCA CCAATGGAAG CAGTAGTGGC AGTAACAGCA GCCTGGTTTC TTCCAACAGC CTAAGGGAAA GCCATAGCCA CACCGTCACA AACAGGAGCA GCACGGACAC GGCATCCATC TTTGGCATCA TACCAGACAT TATTTCATTG GACTGA
Molecular Weight	36,204 Da
OMIM	603566
Vector	pENTR223.1 or pUC
Clone Sequence Report	Provided with product shipment
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for PIAS1 cdna clone	MBS1266110 is a cDNA clone targeting PIAS1.
Other Notes	Small volumes of PIAS1 cdna clone vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PIAS1. It may not necessarily be applicable to this product.

NCBI GI #	112292465

NCBI GeneID	8554
NCBI Accession #	BC121797
UniProt Secondary Accession #	Q147X4; Q99751; Q9UN02; B2RB67; B3KSY9; C5J4B4
UniProt Related Accession #	O75925
NCBI Official Full Name	Homo sapiens protein inhibitor of activated STAT, 1, mRNA
NCBI Official Synonym Full Names	protein inhibitor of activated STAT 1
NCBI Official Symbol	PIAS1
NCBI Official Synonym Symbols	GBP; ZMIZ3; DDXBP1; GU/RH-II
UniProt Protein Name	E3 SUMO-protein ligase PIAS1
UniProt Synonym Protein Names	DEAD/H box-binding protein 1; Gu-binding protein; GBP; Protein inhibitor of activated STAT protein 1; RNA helicase II-binding protein
Protein Family	E3 SUMO-protein ligase
UniProt Gene Name	PIAS1
UniProt Synonym Gene Names	DDXBP1; GBP
UniProt Entry Name	PIAS1_HUMAN
NCBI Protein Information	E3 SUMO-protein ligase PIAS1
NCBI Summary for PIAS1	This gene encodes a member of the protein inhibitor of activated STAT (PIAS) family. PIAS proteins function as SUMO E3 ligases and play important roles in many cellular processes by mediating the sumoylation of target proteins. This protein plays a central role as a transcriptional coregulator of numerous cellular pathways includign the STAT1 and nuclear factor kappaB pathways. Alternate splicing results in multiple transcript variants. [provided by RefSeq, Mar 2016]
UniProt Comments for PIAS1	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. 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. Together with PRMT1, may repress STAT1 transcriptional activity, in the late phase of interferon gamma (IFN-gamma) signaling. Interacts with NCOA2 and AR. Interacts with NR2C1; the interaction promotes its sumoylation. Interacts with DDX21, CSRP2, AXIN1, JUN, UBE2I, SUMO1, SATB2, PLAG1, TP53 and STAT1 (dimer), following IFNA1-stimulation. Interacts with SP3 (preferentially when SUMO-modified). Interacts with KLF8; the interaction results in SUMO ligation and repression of KLF8 transcriptional activity and of its cell cycle progression into G(1) phase. Interacts with STAT1. Interacts with CHUK/IKKA; this interaction induces PIAS1 phosphorylation. Interacts with PTK2/FAK1; the interaction promotes its sumoylation. Interacts with DDX5. Expressed in numerous tissues with highest level in testis. Belongs to the PIAS family. Protein type: EC 6.3.2.-; Transcription, coactivator/corepressor; SUMO conjugating system; Nuclear receptor co-regulator Chromosomal Location of Human Ortholog: 15q Cellular Component: nucleoplasm; nucleus; PML body Molecular Function: enzyme binding; protein binding; SUMO ligase activity; transcription corepressor activity Biological Process: JAK-STAT cascade; positive regulation of proteasomal ubiquitin-dependent protein catabolic process; positive regulation of protein sumoylation; protein sumoylation; regulation of cell proliferation
Research Articles on PIAS1	**1.** PIAS1 enhances p300 recruitment to c-Myb-bound sites through interaction with both proteins. In addition, the E3 activity of PIAS1 enhances further its coactivation

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