

## Product datasheet for **MR209412**

### **Pias2 (NM\_001164168) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Pias2 (NM_001164168) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pias2
Synonyms:	6330408K17Rik; AI462206; ARIP3; AU018068; Dib; Miz1; PIASxalpha; PIASxb; PIASxbeta; SIZ2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR209412 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGTTTCTAGTTTTAGGGTTTCTGAGTTACAAGTGTACTGGGCTTTGCTGGACGGAATAAAAGTGGGC  
 GCAAGCATGACCTCCTGATGAGGGCGTTGCATTTATTGAAGAGTGGCTGCAGCCCTGCGGTTTCAGATTAA  
 AATTCGAGAATTATATAGACGCCGATACCCACGGACACTTGAAGGACTTTGTGATCTTCCACAATCAAA  
 TCATCGGTTTTAGCTTGGATGGTAGCTCATCACCCGTAGAACCCTGACTTGCCTGTGGTGGGATCCACT  
 CGTTGCCCTTCGACTTCAATTACACCTCATTACCCGTCTCTCTGTTGGTTCTGTACTGTGCAAGACAC  
 TAAGCCCACCTTTGAGATGCAGCAGCCGCTCCGCCCATCTCTGTCCATCCTGATGTGCAGTAAAA  
 AACCTGCCTTCTATGATGTCCTTGATGTTCTCATCAAGCCACGAGTTAGTTCAAAGCAGTATTCAGC  
 GGTTTCAAGAGAAGTTTTTATTTTGGCTTTGACACCTCAGCAAGTTAGAGAAATATGTATTTCAAGGGA  
 CTTTTTCCGGGTGGCAGGAGAGACTACACAGTCCAAGTCCAGCTGCGACTTTGCTTGGCAGAGACCAGT  
 TGCCCTCAAGAAGATAACTATCCCAATAGTTTGTGTATAAAAAGTCAATGGGAAACTCTTCTTTGCCTG  
 GCTATGCGCCACCACCTAAAAATGGGATTGAACAGAAGCGCCCTGGACGCCCCCTGAACATTACGCTTT  
 AGTTAGGTTGCTTCAGCTGTGCCAAATCAGATTTCTATTTCTTGGGCATCTGAAATTGGAAAGAATTAC  
 TCCATGTCTGTGATCTTGTACGACAGCTTACATCAGCCATGTTATTACAGAGATTAATAATGAAAGGTA  
 TTAGAAATCCTGATCATTCCAGAGCACTAATAAAGAAAACTTACTGCAGACCCGTAGTGAATTTGC  
 TACAACAGTCTTCGAGTGTCTTGATGTGCCCTTAGGAAAAATGAGGCTGACAATCCCGTCCCGTGCA  
 GTGACTGTACACATCTGCAGTGCTTTGATGCTGCCCTCTATCTTCAGATGAATGAGAAAAAGCCCACT  
 GGATCGTCTCTGTTGTGACAAAAAGGCTGCCTATGAGAGTCTGATACTAGATGGGCTTTTTATGGAAAT  
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 CTTGTTCACTGACTGTAGCCAGTGTGCAAGCAAGAAGAAGATAGATGTTATTGATCTAACAAATAGAGAG  
 CTCTTCTGATGAAGAGGAAGACCCTCCCGCAAAGGAAATGCATCTTTATGTCAGAAACACAAAGCAGT  
 CCAACCAAGGGGTTCTCATGTATCAGCCATCTTCTGTAAGGGTGCCAGTGTGACTTCAGTTGATCCTG  
 CTGCTATCCACCTTCATTAACAGACTACTCAGTACCATTCCACCACACGCCAGTGTCAAGCATGTCATC  
 AGATTTGCCAGGTTGGATTTCTTTCCCTTATCCAGTTGATCCCGACTGCTCCTCTATGTTTTTG  
 GATAGTCTCACCTCACCTTAACAGCAAGCAGTACGTCTGTACCACCACCGCCCATGAAAGCAGTA  
 CTCACGTTAGTTCATCCAGCAGCAGGAGTGAGACAGGGGTATAACCAGCAGTGGGAGGAACATCTCTGA  
 CATCATCTCTTTGGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

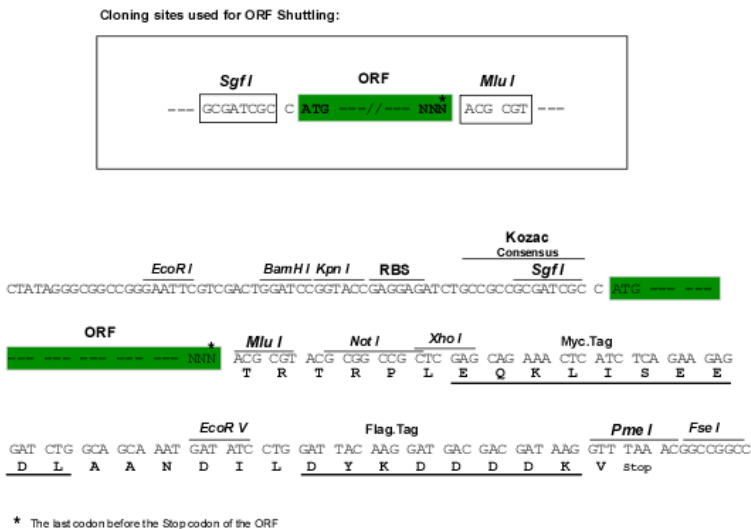
>MR209412 protein sequence  
 Red=Cloning site Green=Tags(s)

MVSSFRVSELQVLLGFAGRNKSGRKHDLMLRALHLLKSGCSPAVQIKIRELYRRRYPRTLEGLCDLSTIK  
 SSVFSLDGSSSPVEPDLPVAGIHLSPSTSIPTSPSSPVGSLVLLQDTKPTFEMQQPSPPIPPVHPDVQLK  
 NLPFYDVLVLIKPTSLVQSSIQRFEKFFIFALTPQQVREICISRDFLPGRRDYTVVQQLRCLLAETS  
 CPQEDNYPNSLCKIVNGKLFPLPGYAPPPKNGIEQKRPGRPLNITSLVRLSSAVPNQISISWASEIGKNY  
 SMSVYLVRQLTSAMLLQRLKMKGIRNPDHSRALIKEKLTADPDSEIATTSRVSMLMCPLGKMRLTIPCRA  
 VTCTHLQCFDAALYLQMNEKKPTWICPVCDKKAAYESLILDGLFMEILNDCSDVDEIKFQEDGSWCPMRP  
 KKEAMKVTSPCTKVESSVFSKPCSVTVASDASKKIDVIDLTIESSSDEEEDPPAKRKCIFMSETQSS  
 PTKGVLMYQPSSVRVPSVTSVDPAAIPPSLTDYSVPFHHTPVSSMSDPLGLDFLSLIPVDPQYCPMPFL  
 DSLTSPLTASSTSVTTTSPHESSTHVSSSSSRSETGVITSSGRNIPDIISLD

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_001164168

ORF Size: 1839 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM\\_001164168.1](#), [NP\\_001157640.1](#)

RefSeq Size: 4984 bp

RefSeq ORF: 1845 bp

Locus ID: 17344

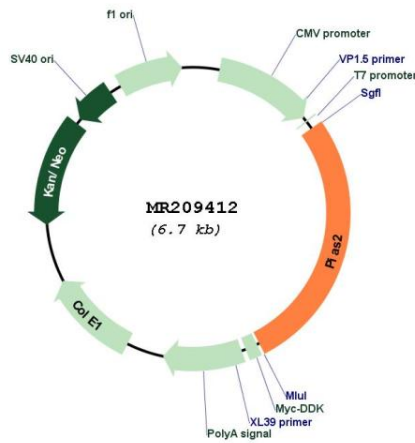
UniProt ID: [Q8C5D8](#)

**Cytogenetics:** 18 E3

**MW:** 67.3 kDa

**Gene Summary:** 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. The effects of this transcriptional coregulation, transactivation or silencing may vary depending upon the biological context and PIAS2 isoform studied. However, it seems to be mostly involved in gene silencing. Binds to sumoylated ELK1 and enhances its transcriptional activity by preventing recruitment of HDAC2 by ELK1, thus reversing SUMO-mediated repression of ELK1 transactivation activity. Isoform PIASx-beta, but not isoform PIASx-alpha, promotes MDM2 sumoylation. Isoform PIASx-alpha promotes PARK7 sumoylation. Isoform PIASx-beta promotes NCOA2 sumoylation more efficiently than isoform PIASx-alpha (By similarity). Sumoylates PML at 'Lys-65' and 'Lys-160' (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR209412