

## Product datasheet for **MG209412**

### **Pias2 (BC005596) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Pias2 (BC005596) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Pias2
Synonyms:	Dib, ARIP3, PIASxbeta, SIZ2, PIASxb, PIASxalpha
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG209412 representing BC005596  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGTTTCTAGTTTTAGGGTTTCTGAGTTACAAGTGTACTGGGCTTTGCTGGACGGAATAAAAGTGGGC  
 GCAAGCATGACCTCCTGATGAGGGCGTTGCATTTATTGAAGAGTGGCTGCAGCCCTGCGGTTTCAGATTAA  
 AATTCGAGAATTATATAGACGCCGATACCCACGGACACTTGAAGGACTTTGTGATCTTCCACAATCAAA  
 TCATCGGTTTTAGCTTGGATGGTAGCTCATCACCCGTAGAACCCTGACTTGCCTGTGGTGGGATCCACT  
 CGTTGCCCTTGCAGTTCAATTACACCTCATTACCGTCATCTCCTGTTGGTCTGTACTGTGCAAGACAC  
 TAAGCCCACCTTTGAGATGCAGCAGCCGCTCCGCCCATCTCCTGTCCATCCTGATGTGCAGTAAAA  
 AACCTGCCTTTCTATGATGTCCTTGATGTTCTCATCAAGCCCACGAGTTAGTTCAAAGCAGTATTCAGC  
 GGTTTCAAGAGAAGTTTTTATTTTTGCTTTGACACCTCAGCAAGTTAGAGAAATATGTATTTCAAGGGA  
 CTTTTTCCGGGTGGCAGGAGAGACTACACAGTCCAAGTCCAGCTGCGACTTTGCTTGGCAGAGACCAGT  
 TGCCTCAAGAAGATAACTATCCCAATAGTTTGTGTATAAAAAGTCAATGGGAAACTTTTCTTTGCCTG  
 GCTATGCGCCACCACCTAAAAATGGGATTGAACAGAAGCGCCCTGGACGCCCCCTGAACATTACGCTTT  
 AGTTAGGTTGCTTACAGCTGTGCCAAATCAGATTTCTATTTCTTGGGCATCTGAAATTGGAAAGAATTAC  
 TCCATGTCTGTGATCTTGTACGACAGCTTACATCAGCCATGTTATTACAGAGATTAATAATGAAAGGTA  
 TTAGAAATCCTGATCATTCCAGAGCACTAATAAAGAAAACTTACTGCAGACCTGATAGTGAAATTGC  
 TACAACAGTCTTCGAGTGTCTTGATGTGCCCTTTAGGAAAAATGAGGCTGACAATCCCGTGGCGTGCA  
 GTGACTTGTACACATCTGCAGTGCTTTGATGCTGCCCTCTATCTTCAGATGAATGAGAAAAAGCCACCT  
 GGATCTGCTCTGTTGTGACAAAAAGGCTGCCTATGAGAGTCTGATACTAGATGGGCTTTTTATGGAAAT  
 TCTCAATGACTGTTCTGATGTGGATGAGATCAAATCCAGGAAGATGGTCTTGGTGTCCCATGAGACCT  
 AAAAAAGAAAGCTATGAAAGTAACCAGCCAGCCCTGTACAAAAGTAGAAAGTTCAAGTGTCTTTAGTAAAC  
 CTTGTTCACTGACTGTAGCCAGTGTGCAAGCAAGAAGAAGATAGATGTTATTGATCTAACAATAGAGAG  
 CTCTTCTGATGAAGAGGAAGACCCTCCCGCCAAAAGGAAATGCATCTTTATGTCAGAAACACAAAGCAGT  
 CCAACCAAGGGGTTCTCATGTATCAGCCATCTTCTGTAAGGGTGCCAGTGTGACTTCAGTTGATCCTG  
 CTGCTATTCCACCTTCATTAACAGACTACTCAGTACCATTCCACCACACGCCAGTGTCAAGCATGTCATC  
 AGATTTGCCAGGTTGGATTTCTTTCCCTTATCCAGTTGATCCCAGTACTGCTCCTATGTTTTTG  
 GATAGTCTCACCTCACCTTAACAGCAAGCAGTACGTCTGTACCACCACCAGCCCCATGAAAGCAGTA  
 CTCACGTTAGTTCATCCAGCAGCAGGAGTGAGACAGGGGTATAACCAGCAGTGGGAGGAACATTCTGTA  
 CATCATCTCTTTGGAC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>MG209412 representing BC005596  
 Red=Cloning site Green=Tags(s)

MVSSFRVSELQVLLGFAGRNKSGRKHDLMLRALHLLKSGCSPAVQIKIRELYRRRYPRTEGLCDLSTIK  
 SSVFLDGS SSPVEPDLPVAGIHSPLPSTSIPTSPSSPVGSVLLQDKPTFEMQQPSPPIPPVHPDVQLK  
 NLPFYDVL DVL IKPTSLVQSSIQR FQEKFFIFALTPQQVREICISRDFLPGRRDYTVQVQLRLCLAETS  
 CPQEDNYPNSLCIKVNGKLFPLPGYAPPPKNGIEQKRPGRPLNITSLVRLSSAVPNQISISWASEIGKNY  
 SMSVYLVRQLTSAMLLQRLKMKGIRNPDHSRALIKEKLTADPDEIATTSRLRVSLMCP LGKMRLTIPCRA  
 VTCTHLQCFDAALYLQMNEKKPTWICPVCDKKAAYESLILDGLFMEILNDCSDVDEIKFQEDGSWCPMRP  
 KKEAMKVT SQPCTKVESSVFSKPCSVTVASDASKKIDVIDLTI ESSSDEEEDPPAKRKCIFMSETQSS  
 PTKGVLMYQPSSVRVPSVTSVDPAAIPPSLTDYSVPFHHTPVSSMSDLPLDGLSLIPVDPQYCPMPFL  
 DSLTSPLTASSTSVTTTSPHESSTHVSSSSSRSETGVITSSGRNIPDIISLD

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI



<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">BC005596</a> , <a href="#">AAH05596</a>
<b>RefSeq Size:</b>	2269 bp
<b>RefSeq ORF:</b>	1838 bp
<b>Locus ID:</b>	17344
<b>Cytogenetics:</b>	18 E3
<b>Gene Summary:</b>	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]