

## Product datasheet for **MG225568**

### **Pias2 (NM\_008602) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Pias2 (NM_008602) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Pias2
Synonyms:	6330408K17Rik; AI462206; ARIP3; AU018068; Dib; Miz1; PIASxalpha; PIASxb; PIASxbeta; SIZ2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG225568 representing NM\_008602  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGCGGATTTTCGAGGAGTTGAGGAATATGGTTTCTAGTTTTAGGTTTTCTGAGTTACAAGTGTACTGG  
 GCTTTGCTGGACGGAATAAAAGTGGGCGCAAGCATGACCTCCTGATGAGGGCGTTGCATTTATTGAAGAG  
 TGGCTGCAGCCCTGCGGTTCCAGATTAATAATTCGAGAATTATATAGACGCCGATACCCACGGACACTTGAA  
 GGACTTTGTGATCTTTCCACAATCAAATCATCGGTTTTAGCTTTGGATGGTAGCTCATCACCCGTAGAAC  
 CTGACTTGCCGTGGCTGGGATCCACTCGTTGCCCTCGACTTCAATTACACCTCATTACCCTGTCATCTCC  
 TGTTGGTTCTGTACTGCTGCAAGACACTAAGCCACCTTTGAGATGCAGCAGCCGCTCCGCCATTCTCT  
 CCTGTCCATCCTGATGTGCAGTTAAAAACCTGCCTTTCTATGATGTCTTGATGTTCTCATCAAGCCCA  
 CGAGTTTAGTTCAAAGCAGTATTCAGCGGTTTCAAGAGAAGTTTTTTATTTTGGCTTTGACACCTCAGCA  
 AGTTAGAGAAATATGATTTCAAGGGACTTTTTGCCGGGTGGCAGGAGAGACTACACAGTCCAAGTCCAG  
 CTGCGACTTTGCTTGGCAGAGACCAGTTGCCCTCAAGAAGATAACTATCCAATAGTTTGTGTATAAAAG  
 TCAATGGGAAACTCTTTCTTTGCTGGCTATGCGCCACCACCTAAAAATGGGATTGAACAGAAGCGCCC  
 TGGACGCCCTGAACATTACGCTTTAGTTAGGTTGTCTTCAGCTGTGCCAAATCAGATTTCTATTTCT  
 TGGGCATCTGAAATTGGAAAGAATTACTCCATGTCTGTGTATCTGTACGACAGCTTACATCAGCCATGT  
 TATTACAGAGATTAATAATGAAAGGTATTAGAAATCCTGATCATTCCAGAGCACTAATTAAGAAAAA  
 TACTGCAGACCCTGATAGTGAATTGCTACAACAGTCTTCGAGTGTCTTGATGTGCCCTTTAGGAAAA  
 ATGAGGCTGACAAATCCCGTGGCGTGCAGTACTGTACACATGTCAGTGTCTTGATGTGCCCTTTAGG  
 TTCAGATGAATGAGAAAAAGCCACCTGGATCTGCTGTTTGACAAAAAGGCTGCCTATGAGAGTCT  
 GATACTAGATGGGCTTTTTATGGAAATCTCAATGACTGTTCTGATGTGGATGAGATCAAATTCAGGAA  
 GATGGTTCTTGGTGTCCCATGAGACCTAAAAAGAAGCTATGAAAGTAACCAGCCAGCCCTGTACAAAA  
 TAGAAAGTTCAAGTGTCTTTAGTAAACCTGTTTCAGTACTGTAGCCAGTGTGCAAGCAAGAAGAAGAT  
 AGATGTTATTGATCTAACAATAGAGAGCTCTTCTGATGAAGAGGAAGACCCTCCCGCCAAAAGGAAATGC  
 ATCTTTATGTCAGAAACAAAAGCAGTCCAACCAAGGGGTTCTCATGTATCAGCCATCTTCTGTAAGGG  
 TGCCAGTGTGACTTCAGTTGATCCTGCTGCTATTCCACCTTCATTAACAGACTACTCAGTACCATTCCA  
 CCACACGCCAGTGTCAAGCATGTCATCAGATTTGCCAGGTTGGATTTTCTTTCCCTTATCCAGTTGAT  
 CCCCAGTACTGCTCCTATGTTTTGGATAGTCTCACCTCACCTTAACAGCAAGCAGTACGTCTGTCA  
 CCACCACGACCCCATGAAAGCAGTACTCACGTTAGTTCATCCAGCAGCAGGAGTGAGACAGGGGTCAT  
 AACCAGCAGTGGGAGGAACATTCCTGACATCATCTCTTTGGAC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG225568 representing NM\_008602  
 Red=Cloning site Green=Tags(s)

MADFEELRNMVSSFRVSELQVLLGFAGRNKSGRKHDLMLRALHLLKSGCSPAVQIKIRELYRRRYPRTE  
 GLCDLSTIKSSVFLDGSSSPVEPDLPVAGIHLSPSTSIIPHSPSPVGSVLLQDKPTFEMQQSPPIP  
 PVHPDVQLKNLPHYDVLVLIKPTSLVQSSIQRFEKFFIFALTPQQVREICISRDFLPGGRRDYTVQVQ  
 LRLCLAETSCPQEDNYPNSLCIKVNGKLFPLPGYAPPPKNGIEQKRPGRPLNITSLVRLSSAVPNQISIS  
 WASEIGKNYSMSVYLVRQLTSAMLLQRLKMKGIRNPDHSRALIKEKLTADPDSEIATTSLRVSLMCP  
 LK MRLTIPCRAVTC THLQCFDAALYLQMNKKTWICPVCDKKAAYESLILDGLFMEILNDCSDVDEIKFQE  
 DGSWCPMRPKKEAMKVTSPQCTKVESSVFSKPCSVTVASDASKKIDVIDLTISSSDDEEDPPAKRKC  
 IFMSETQSSPTKGLVMPSSVRVPSVTSVDPAAIPPSLTDYSVPFHHTPVSSMSDPLGLDFLSLIPVD  
 PQYCPMFLDSLTSPLTASSTVTTSPHESSTHVSSSSSRSETGVITSSGRNIPDIISLD

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

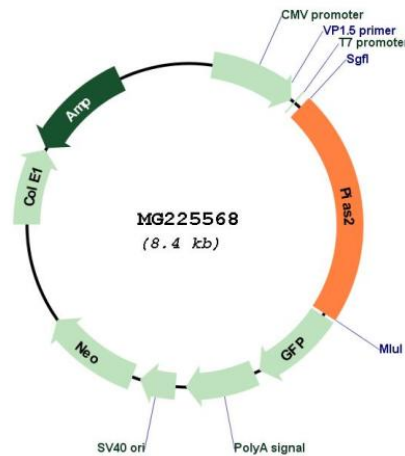
SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM\_008602  
 ORF Size: 1863 bp

<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="#">NM_008602.4</a> , <a href="#">NP_032628.3</a>
<b>RefSeq Size:</b>	4968 bp
<b>RefSeq ORF:</b>	1866 bp
<b>Locus ID:</b>	17344
<b>UniProt ID:</b>	<a href="#">Q8C5D8</a>
<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]