

## Product datasheet for **MC229436**

### Hipk2 (NM\_001294143) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Hipk2 (NM\_001294143) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Hipk2  
**Synonyms:** 1110014O20Rik; B230339E18Rik; Stank  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >MC229436 representing NM\_001294143  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCCCCGTGTACGAAGGTATGGCCTCACATGTGCAAGTTTTCTCCCCTCACACCCTCAATCAAGTG  
 CCTTCTGTAGTGTGAAGAACTAAAAGTAGAGCCAAGTCCAACCTGGGACATGACTGGGTACGGCTCCCA  
 CAGCAAAGTGTACAGCCAGAGCAAGAACATACCACCTTCTCAGCCAGCCTCCACAACCGTCAGCACCTCC  
 TTGCCAATCCCCAACCCAAGCCTACCTTACGAGCAGACCATCATCTTCCCAGGAAGTACTGGACACATAG  
 TTGTAACATCAGCAAGTAGCACTTCTGTACCCGGCAAGTCTCGGTGGACCACATAACCTAATGCGTCCG  
 AAGCACTGTGAGCCTCCTTGACACCTACCAAAAATGTGGACTCAAGCGCAAGAGTGAGGAGATTGAGAAC  
 ACAAGCAGCGTGCAGATCATTGAAGAGCATCCACCCATGATTCAGAATAATGCCAGCGGGGCCACTGTAG  
 CCACTGCCACCACATCCACTGCCACCTCCAAAAACAGTGGCTCCAACAGTGAAGGGGACTATCAGCTGGT  
 GCAGCATGAAGTACTGTGCTCCATGACCAACACCTATGAGGTTTTAGAGTTCTTGGGGCGAGGGACATTT  
 GGGCAAGTGGTCAAGTGTGAAACGGGGCACCATGAAATTGTGGCCATTAAGATCCTCAAGAACCACC  
 CCTCCTATGCCCGCAAGGCCAGATTGAAGTGAGCATCTTGGCCGGCTGAGCAGCGAGGCGCTGATGA  
 CTAACAATTTGTGCGGGCTATGAGTGCTTCCAGCACAAGAACCACACGTGCTTAGTCTTTGAGATGTTG  
 GAGCAGAACCCTTATGACTTTCTGAAACAGAACAAGTTTGTCCCTTGCCCTCAAGTATATTGCCCCAG  
 TCCTCCAGCAGGTAGCCACAGCCCTGATGAAACTCAAAAGCCTGGGTCTTATCCATGCTGACCTCAAACC  
 AGAAAACATCATGCTGGTGGATCCATCCAGACAACCGTACCGAGTGAAGGTCAATTGACTTTGGTTACGT  
 AGTCATGTGTCCAAGCTGTCTGCTCTACGTACTTGAATCCAGATACTACCGGGCCCTGAGATCATCC  
 TTGGTTTGCCATTCTGTGAGGCAATTGACATGTGGTCCCTGGTTGTGTCATTGCTGAAGTGTCTCTGGG  
 CTGGCCATTATACCCAGGTGCTTCTGAGTATGATCAGATTCGGTATATTTCAAAAACACAGGGTTTACCA  
 GCTGAATATTTAAGTGCAGGACAAAGACAAGTGGTTTTTCAACCGTGACACAGACTCACCGTATC  
 CTTTGTGAGGCTAAAGACACCAGATGACCATGAAGCAGAGACGGGAATTAAGTCAAAGGAAGCAAGAAA  
 GTACATTTTCAACTGTTTGGATGATATGGCCAGGTGAACATGACAACAGATTTGGAAGGGAGTGACATG  
 TTAGTAGAGAAGGCAGACCCGACGGGAGTTCATTGACCTGTTAAAGAAGATGCTGACCATCGATGCTGATA



AGAGAGTCACTCCCATTGAAACTCTGAACCACCCCTTTGTACCATGACACACCTGCTTGACTTCCCCCA  
 TAGTGCCCATGTCAAATCTTGTTTCAAACACATGGAGATTTGCAAGCGCCGGGTGAATATGTATGACACA  
 GTGAACCAGAGCAAAACACCTTTTCATCACTCACGTGGCCCCCAGCACATCCACCAACTTGACCATGACCT  
 TTAACAACCAGCTGACCACTGTCCACAACCAGCCCTCAGCGGCATCCATGGCCGCGGTGGCCCCGCGGAG  
 CATGCCCTGCAGACGGGAACAGCCAAATTTGTGCCGACCTGATCCCTCCAGCAAGCTCTCATCGTG  
 TGTCCCCTGGCTTCCAAGGCCGTGACGGCTCTCCCTCCAAGCACGCTGGCTACTCAGTGGCGGATGGAAA  
 ATGCTGTCCCCATCGTCACCCAGGCGCCAGGACTCAGCCTCTTCAGATCCAACCAGGCCCTGCTTGCTCA  
 GCAGGCCGTGGCCAGGTGGGGCCCAACAGATCCTACTTCCCTCCAGCATGGCAGCAGCTGACTGGCGTGGCC  
 ACCCACACATCTGTACAGCATGCAGCTGTGATTCTGAGACCATGGCAGGCACTCAGCAACTGGCTGACT  
 GGAGGAACACGCATGCTCATGGAAGTCATTACAATCCCATCATGCAGCAGCCTGCACTCTTGACTGGTCA  
 TGTGACCTTCCAGCTGCCAGCCCTTAAATGTGGGTGTAGCCCATGTGATGAGGCAACAACCAACCAGC  
 ACCACCTCTCCAGGAAGAGTAAGCAGCACCAGTCATCTGTGAGAAATGTCTCCACCTGTGAGGTGACCT  
 CTTACAGGCTATCAGCTCCCCTCAGCGATCCAAGCGTGTCAAGGAGAACAACCTCCCCACGGTGCGCCAT  
 GGTACACAGCAGCCAGCTTGCAGCACCTCAGTCACCTGTGGGTGGGGCAGCTGGCCTCCAGCACCACC  
 CGGGAGCGACAGCGGCAGACGATTGTATCCCCGACACCCGAGCCCCACAGTCAGTGTATCACCATCA  
 GCAGTGACACCGATGAAGAAGAGGAGCAGAAGCAGCCCCACCAGCACAGTCTCCAAGCAAAGAAAAAA  
 TGTATCAGCTGTGTACCGTCCACGACTCTCCCTACTCTGACTCCTCCAGCAACACCAGCCCCTACTCG  
 GTGCAGCAGCGCACAGGGCACAACCGCACCAACACCTTGACACCAAGGGGGGCCAGAGAATCACTGCA  
 CTGGCAACCCCCGACCATCATCGTACCCCACTGAAGACCCAGGCCAGTGAAGTGTGGTAGAATGTGA  
 CAGCCTAGGGCCAGCGATCAGTGCCAGTCACCAATTCGCTCCTTCAAGTCCAAGTCTCCAGCACCCTG  
 ACCTCCACAGTGGACACTCTTCAGGGAGCTCTCAGGAGCCATCGCCTACCGTCAGCAGCGGCCAGGCC  
 CCCACTTCCAGCAGCAGCAGCCCTCAATCTCAGCCAGGCCAGCAGCACATGGCTGCGGACCGCACCGG  
 GAGTCACCGTCGACAGCAGGCCCTACATCACTCCGACCATGGCGCAAGTCCGTACACCTTCCCGACAAC  
 AGCCCCAGCCATGGCACTGTTACCCCCACCTGGCTGCGGCTGCCACCTCCCCACCCAGCCTCACCTCT  
 ACACCTATACAGCGCCCACAGCCCTAGGCTCCACCGGCACTGTAGCCACCTGGTGGCATCCCAAGGCTC  
 AGCACGCCACACCGTGCAGCACACTGCCTATCCGGCCAGCATCGTCCACCAGGTCCCTGTGAGCATGGGG  
 CCCCAGGCTCCTGCCCTCGCCACCATCCACCCAGTCAGTATCCAGCCAGTTTGCCACCAGACCTATA  
 TCAGCGCCTCGCCAGCCTCCACCGTCTACACTGGATACCCACTGAGTCTGCCAAGGTCAACCAATACCC  
 TTACATA**TAA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM\_001294143
- Insert Size:** 3510 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
- 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\\_001294143.1](#), [NP\\_001281072.1](#)

**RefSeq Size:** 4178 bp

**RefSeq ORF:** 3510 bp

**Locus ID:** 15258

**UniProt ID:** [Q9QZR5](#)

**Cytogenetics:** 6 B1

**Gene Summary:**

Serine/threonine-protein kinase involved in transcription regulation, p53/TP53-mediated cellular apoptosis and regulation of the cell cycle. Acts as a corepressor of several transcription factors, including SMAD1 and POU4F1/Brn3a and probably NK homeodomain transcription factors. Phosphorylates PDX1, ATF1, PML, p53/TP53, CREB1, CTBP1, CBX4, RUNX1, EP300, CTNNB1, HMGA1 and ZBTB4. Inhibits cell growth and promotes apoptosis through the activation of p53/TP53 both at the transcription level and at the protein level (by phosphorylation and indirect acetylation). The phosphorylation of p53/TP53 may be mediated by a p53/TP53-HIPK2-AXIN1 complex. Involved in the response to hypoxia by acting as a transcriptional co-suppressor of HIF1A. Mediates transcriptional activation of TP73. In response to TGF $\beta$ , cooperates with DAXX to activate JNK. Negative regulator through phosphorylation and subsequent proteasomal degradation of CTNNB1 and the antiapoptotic factor CTBP1. In the Wnt/beta-catenin signaling pathway acts as an intermediate kinase between MAP3K7/TAK1 and NLK to promote the proteasomal degradation of MYB. Phosphorylates CBX4 upon DNA damage and promotes its E3 SUMO-protein ligase activity. Activates CREB1 and ATF1 transcription factors by phosphorylation in response to genotoxic stress. In response to DNA damage, stabilizes PML by phosphorylation. PML, HIPK2 and FBXO3 may act synergically to activate p53/TP53-dependent transactivation. Promotes angiogenesis, and is involved in erythroid differentiation, especially during fetal liver erythropoiesis. Phosphorylation of RUNX1 and EP300 stimulates EP300 transcription regulation activity. Triggers ZBTB4 protein degradation in response to DNA damage. Modulates HMGA1 DNA-binding affinity. In response to high glucose, triggers phosphorylation-mediated subnuclear localization shifting of PDX1. Involved in the regulation of eye size, lens formation and retinal lamination during late embryogenesis. [UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (3) uses an alternate in-frame splice site in the central coding region compared to variant 2. The encoded isoform (3) is shorter than isoform 2. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.