

Product datasheet for **MG227512**

Hipk2 (NM_010433) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Hipk2 (NM_010433) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Hipk2
Synonyms:	1110014O20Rik; B230339E18Rik; Stank
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG227512 representing NM_010433 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCCCGTGTACGAAGGTATGGCCTCACATGTGCAAGTTTTCTCCCCTCACACCCTCAATCAAGTG
CCTTCTGTAGTGTGAAGAACTAAAAGTAGAGCCAAGTCCAACCTGGGACATGACTGGGTACGGCTCCCA
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CCTACTGCCACCACATCCACTGCCACCTCCAAAAACAGTGGCTCCAACAGTGAAGGGGACTATCAGCTGGT
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CCTCCTATGCCCGCAAGGCCAGATTGAAGTGAGCATCTTGGCCCGGCTGAGCACGGAGAGCGCTGATGA
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TTAGTAGAGAAGGCAGACCCGACGGGAGTTCATTGACCTGTAAAGAAGATGCTGACCATCGATGCTGATA
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CCAGACCTATATCAGCGCTCGCCAGCCTCCACCGTCTACTGGATACCCACTGAGTCTGCCAAGGTC
AACCAATACCCTTACATA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG227512 representing NM_010433
 Red=Cloning site Green=Tags(s)

MAPVYEGMASHVQVFSPTLQSSAFCSVKLKVPESSNWDMTGYGSHSKVYSQSKNIPPSQPASTTVSTS
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 TSSVQIIEEHPPMIQNNASGATVATATTSTATSKNSGNSSEGDYQLVQHEVLCSTMNTYEVLEFLGRGTF
 GQVVKCKWRGTNEIVA I K I L K N H P S Y A R Q G Q I E V S I L A R L S T E S A D D Y N F V R A Y E C F Q H K N H T C L V F E M L
 EQNL Y D F L K Q N K F S P L P L K Y I R P V L Q Q V A T A L M K L K S L G L I H A D L K P E N I M L V D P S R Q P Y R V K V I D F G S A
 S H V S K A V C S T Y L Q S R Y R A P E I I L G L P F C E A I D M W S L G C V I A E L F L G W P L Y P G A S E Y D Q I R Y I S Q T Q G L P
 A E Y L L S A G T K T T R F F N R D T D S P Y P L W R L K T P D D H E A E T G I K S K E A R K Y I F N C L D D M A Q V N M T T D L E G S D M
 L V E K A D R R E F I D L L K K M L T I D A D K R V T P I E T L N H P F V T M H L L D F P H S A H V K S C F Q N M E I C K R R V N M Y D T
 V N Q S K T P F I T H V A P S T S T N L T M T F N N Q L T T V H N Q A P T T S S A T L S L A N P E V S I L N Y Q S A L Y Q P S A A S M A A V
 A P R S M P L Q T G T A Q I C A R P D P F Q Q A L I V C P P G F Q G L Q A S P S K H A G Y S V R M E N A V P I V T Q A P G A Q P L Q I Q P G
 L L A Q Q A W P G G A Q Q I L L P P A W Q Q L T G V A T H T S V Q H A A V I P E T M A G T Q Q L A D W R N T H A H G S H Y N P I M Q Q P A L
 L T G H V T L P A A Q P L N V G V A H V M R Q Q P T S T S S R K S K Q H Q S S V R N V S T C E V T S S Q A I S S P Q R S K R V K E N T P P
 R C A M V H S S P A C S T S V T C G W G D V A S T T R E R Q R Q T I V I P D T P S P T V S V I T I S S D T D E E E E Q K H A P T S T V S K
 Q R K N V I S C V T V H D S P Y S D S S N T S P Y S V Q R T G H N G T N T L D T K G L E N H C T G N P R T I I V P P L K T Q A S E V L
 V E C D S L G P A I S A S H S S F K S K S S T V T S T S G H S S G S S G A I A Y R Q R P G P H F Q Q Q P L N L S Q A Q Q H M A A
 D R T G S H R R Q Q A Y I T P T M A Q A P Y T F P H N S P S H G T V H P H L A A A A H L P T Q P H L Y T Y T A P T A L G S T G T V A H L V A
 S Q G S A R H T V Q H T A Y P A S I V H Q V P V S M G P R V L P S P T I H P S Q Y P A Q F A H Q T Y I S A S P A S T V Y T G Y P L S P A K V
 N Q Y P Y I

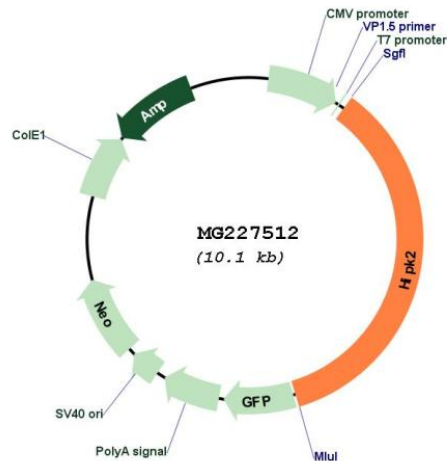
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_010433

ORF Size: 3588 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_010433.2](#), [NP_034563.2](#)

RefSeq Size: 4259 bp

RefSeq ORF: 3591 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 β , 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]