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Product datasheet for RC400169

TPOR (MPL) (NM_005373) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	TPOR (MPL) (NM_005373) Human Mutant ORF Clone
Mutation Description:	W515K
Affected Codon#:	515
Affected NT#:	c.1543_1544
Nucleotide Mutation:	MPL Mutant (W515K), Myc-DDK-tagged ORF clone of Homo sapiens myeloproliferative leukemia virus oncogene (MPL) as transfection-ready DNA
Effect:	Missense
Symbol:	TPOR
Synonyms:	C-MPL; CD110; MPLV; THCYT2; THPOR; TPOR
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_005373
ORF Size:	1905 bp
Restriction Sites:	SgfI-MluI

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ORF Nucleotide Sequence:

>RC400169 representing NM_005373
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCCTCCTGGGCCCTCTTCATGGTCACCTCCTGCCTCCTCCTGGCCCCTCAAAACCTGGCCCAAGTCA
GCAGCCAAGATGTCTCCTTGCTGGCATCAGACTCAGAGCCCCTGAAGTGTTTCTCCCGAACATTTGAGGA
CCTCACTTGCTTCTGGGATGAGGAAGAGGCAGCGCCCAGTGGGACATACCAGCTGCTGTATGCCTACCCG
CGGGAGAAGCCCCGTGCTTGCCCCCTGAGTTCCCAGAGCATGCCCCACTTTGGAACCCGATACGTGTGCC
AGTTTCCAGACCAGGAGGAAGTGCGTCTCTTCTTTCCGCTGCACCTCTGGGTGAAGAATGTGTTCCTAAA
CCAGACTCGGACTCAGCGAGTCCTCTTTGTGGACAGTGTAGGCCTGCCGGCTCCCCCCAGTATCATCAAG
GCCATGGGTGGGAGCCAGCCAGGGGAACTTCAGATCAGCTGGGAGGAGCCAGCTCCAGAAATCAGTGATT
TCCTGAGGTACGAACTCCGCTATGGCCCCAGAGATCCCAAGAACTCCACTGGTCCCACGGTCATACAGCT
GATTGCCACAGAAACCTGCTGCCCTGCTCTGCAGAGGCCTCACTCAGCCTCTGCTCTGGACCAGTCTCCA
TGTGCTCAGCCCACAATGCCCTGGCAAGATGGACCAAAGCAGACCTCCCCAAGTAGAGAAGCTTCAGCTC
TGACAGCAGAGGGTGGAAGCTGCCTCATCTCAGGACTCCAGCCTGGCAACTCCTACTGGCTGCAGCTGCG
CAGCGAACCTGATGGGATCTCCCTCGGTGGCTCCTGGGGATCCTGGTCCCTCCCTGTGACTGTGGACCTG
CCTGGAGATGCAGTGGCACTTGGACTGCAATGCTTTACCTTGGACCTGAAGAATGTTACCTGTCAATGGC
AGCAACAGGACCATGCTAGCTCCCAAGGCTTCTTCTACCACAGCAGGGCACGGTGCTGCCCCAGAGACAG
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CGCTGCCACTTCAAGTCACGAAATGACAGCATTATTCACATCCTTGTGGAGGTGACCACAGCCCCGGGTA
CTGTTCACAGCTACCTGGGCTCCCCTTTCTGGATCCACCAGGCTGTGCGCCTCCCCACCCCAAACTTGCA
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CCCGAGGAGGGACCCTGGAGCTGCGCCCGCGATCTCGCTACCGTTTACAGCTGCGCGCCAGGCTCAACGG
CCCCACCTACCAAGGTCCCTGGAGCTCGTGGTCGGACCCAACTAGGGTGGAGACCGCCACCGAGACCGCC
TGGATCTCCTTGGTGACCGCTCTGCATCTAGTGCTGGGCCTCAGCGCCGTCCTGGGCCTGCTGCTGCTGA
GGAAGCAGTTTCCTGCACACTACAGGAGACTGAGGCATGCCCTGTGGCCCTCACTTCCAGACCTGCACCG
GGTCCTAGGCCAGTACCTTAGGGACACTGCAGCCCTGAGCCCGCCCAAGGCCACAGTCTCAGATACCTGT
GAAGAAGTGGAACCCAGCCTCCTTGAAATCCTCCCCAAGTCCTCAGAGAGGACTCCTTTGCCCCTGTGTT
CCTCCCAGGCCCAGATGGACTACCGAAGATTGCAGCCTTCTTGCCTGGGGACCATGCCCCTGTCTGTGTG
CCCACCCATGGCTGAGTCAGGGTCCTGCTGTACCACCCACATTGCCAACCATTCCTACCTACCACTAAGC
TATTGGCAGCAGCCT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

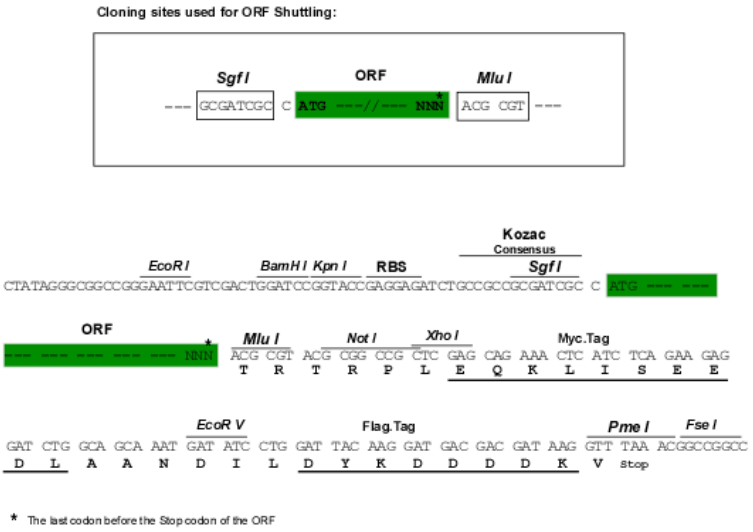
>RC400169 representing NM_005373
Red=Cloning site Green=Tags(s)

MPSWALFMVTSCLLLAPQNLAQVSSQDVSLLASDSEPLKCFSRTFEDLTCFWDEEEAAPSGTYQLLYAYP
REKPRACPLSSQSMPHFGTRYVCQFPDQEEVRLFFPLHLWVKNVFLNQTRTQRVLFVDSVGLPAPPSIIK
AMGGSQPGELQISWEEPAPEISDFLRYELRYGPRDPKNSTGPTVIQLIATETCCPALQRPHSASALDQSP
CAQPTMPWQDGPKQTSPSREASALTAEGGSCLISGLQPGNSYWLQLRSEPDGISLGGSWGSWSLPVTVDL
PGDAVALGLQCFTLDLKNVTCQWQQQDHASSQGFFYHSRARCCPRDRYPIWENCEEEEKTNPGLQTPQFS
RCHFKSRNDSIIHILVEVTTAPGTVHSYLGSPFWIHQAVRLPTPNLHWREISSGHLELEWQHPSSWAAQE
TCYQLRYTGEGHQDWKVLEPPLGARGGTLELRPRSRYRLQLRARLNGPTYQGPWSSWSDPTRVETATETA
WISLVTALHLVLGLSAVLGLLLLRKQFPAHYRRLRHALWPSLPDLHRVLGQYLRDTAALSPPKATVSDTC
EEVEPSLLEILPKSSERTPLPLCSSQAQMDYRRLQPSCLGTMPLSVCPPMAESGSCCTTHIANHSYLPLS
YWQQP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery. 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).
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NP_005364
RefSeq Size:	3645 bp
RefSeq ORF:	1908 bp
Locus ID:	4352
Cytogenetics:	1p34.2
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Cytokine-cytokine receptor interaction, Jak-STAT signaling pathway
MW:	71 kDa

Gene Summary: In 1990 an oncogene, v-mpl, was identified from the murine myeloproliferative leukemia virus that was capable of immortalizing bone marrow hematopoietic cells from different lineages. In 1992 the human homologue, named, c-mpl, was cloned. Sequence data revealed that c-mpl encoded a protein that was homologous with members of the hematopoietic receptor superfamily. Presence of anti-sense oligodeoxynucleotides of c-mpl inhibited megakaryocyte colony formation. The ligand for c-mpl, thrombopoietin, was cloned in 1994. Thrombopoietin was shown to be the major regulator of megakaryocytopoiesis and platelet formation. The protein encoded by the c-mpl gene, CD110, is a 635 amino acid transmembrane domain, with two extracellular cytokine receptor domains and two intracellular cytokine receptor box motifs . TPO-R deficient mice were severely thrombocytopenic, emphasizing the important role of CD110 and thrombopoietin in megakaryocyte and platelet formation. Upon binding of thrombopoietin CD110 is dimerized and the JAK family of non-receptor tyrosine kinases, as well as the STAT family, the MAPK family, the adaptor protein Shc and the receptors themselves become tyrosine phosphorylated. [provided by RefSeq, Jul 2008]