

Product datasheet for MC208444

Epm2a (NM_010146) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Epm2a (NM_010146) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Epm2a
Synonyms:	TcrbK)TG-BFlv; Tg(TcraK; TG-B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC208444 representing NM_010146 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGCTCTTCCGCTTCGGCGTGGTGGTGCCGCCCGCGGTGGCCGGCGCTCGGCAGGAGCTGCTGCTCGCCG
 GCTCGCGGCCGAGTTAGGGCGCTGGGAGCCGCACGGCGCGTGCCTCTCAGGCCCGGGTACCGCGGC
 GGGCGCCGCTGCGCTGGCGCTGCAGGAGCCCGCCTGTGGCTCGCCGAGGTGGAGCTGGAGGCGTACGAG
 GAGGCCGGCGGGCGGAGCCGGGCCGCTTGACACGTTCTGGTACAAGTTCCTGCAGCGCGAGCCTGGAG
 GCGAGCTGCACTGGGAAGGAAATGGACCTACCATGACCGTTGCTGCACATATAATGAGGACAATTGGT
 GGATGGTGTATTGTCTCCAGTAGGACACTGGATTGAGGCCACTGGGCACACCAATGAAATGAAGCAC
 ACAACAGACTTCTATTTAATATTGCTGGCCACCAAGCCATGCACTATTCAAGAATTCTACCAAATATCT
 GGCTGGGTAGCTGCCCTCGCCAACTGGAACATGTGACCATCAAATGAAGCATGAAGTGGAGTTACAGC
 TGTGATGAATTTCCAGACTGAATGGGATATCATCCAGAATTTCTCAGGCTGCAACCGCTACCCTGAACCC
 ATGACTCCAGACACCATGATGAAGCTGTATAAGGAAGAAGGCTTGCTCATCTGGATGCCCACTCCAG
 ACATGAGCACTGAGGGCCGAGTGCAGATGCTGCCACAGGCTGTGTCTCCTGCACGCGCTTCTGGAGAA
 TGGACACACGGTGTATGTCCACTGCAACGCTGGCGTGGTGCCTCCACAGCTGCAGTGTGCGGCTGGCTC
 CACTATGTGATTGGCTGGAATCTGCGCAAGGTGCAGTACTTCATCATGGCCAAGAGGCCTGCGGTCTACA
 TTGACGAGGACGCTTTGGCTCAAGCACAAAGACTTTTCTCAGAAGTTCGGGAAGGTTCACTCTCCAT
 ATGCGCTTTGTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI



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ACCN:	NM_010146
Insert Size:	993 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).
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:	<ol style="list-style-type: none"> 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_010146.2, NP_034276.2</u>
RefSeq Size:	1079 bp
RefSeq ORF:	993 bp
Locus ID:	13853
UniProt ID:	<u>Q9WUA5</u>
Cytogenetics:	10 A1

Gene Summary:

Plays an important role in preventing glycogen hyperphosphorylation and the formation of insoluble aggregates, via its activity as glycogen phosphatase, and by promoting the ubiquitination of proteins involved in glycogen metabolism via its interaction with the E3 ubiquitin ligase NHLRC1/malin (PubMed:18040046, PubMed:18852261, PubMed:19036738, PubMed:23663739, PubMed:24430976, PubMed:24068615). Dephosphorylates phosphotyrosine and synthetic substrates, such as para-nitrophenylphosphate (pNPP), and has low activity with phosphoserine and phosphothreonine substrates (in vitro) (PubMed:16971387, PubMed:24430976). Has also been shown to dephosphorylate MAPT (PubMed:19542233). Shows strong phosphatase activity towards complex carbohydrates in vitro, avoiding glycogen hyperphosphorylation which is associated with reduced branching and formation of insoluble aggregates (PubMed:18040046, PubMed:18852261, PubMed:23663739). Forms a complex with NHLRC1/malin and HSP70, which suppresses the cellular toxicity of misfolded proteins by promoting their degradation through the ubiquitin-proteasome system (UPS) (PubMed:19036738, PubMed:24068615). Acts as a scaffold protein to facilitate PPP1R3C/PTG ubiquitination by NHLRC1/malin. Also promotes proteasome-independent protein degradation through the macroautophagy pathway (PubMed:20453062). [UniProtKB/Swiss-Prot Function]