Product datasheet for MC224161

Erbb4 (NM_010154) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Erbb4 (NM_010154) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Erbb4
Synonyms:	c-erbB-4; Her4
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC224161 representing NM_010154 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAAGCTGGCGACGGGACTCTGGGTCTGGGGGAGCCTTCTGATGGCAGCGGGGACCGTCCAGCCCAGCG
CTTCTCAGTCAGTGTGCGCAGGAACAGAGAACAAACTGAGCTCTCTCTCTGACCTGGAACAGCAGTACCG
AGCCTTGCGCAAATACTATGAAAACTGCGAGGTAGTCATGGGCAACCTGGAGATCACCAGCATCGAGCAC
AACCGGGACCTCTCCTTCCTGCGGTCTATCCGAGAAGTCACAGGCTACGTCCTGGTGGCCCTCAACCAGT
TTCGTTACTTGCCTCTGGAGAATTTACGCATTATTCGTGGGACAAAACTATATGAAGATCGCTATGCCTT
AGCGATATTCTTAAACTACAGGAAAGATGGCAACTTTGGACTCCAAGAACTTGGATTAAAGAACCTGACC
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AAGATGCCATAAGTCTTGCACTGGCCGATGCTGGGGACCCACAGAAAATCACTGCCAGACCTTGACCAGA
ACTGTGTGTGCTGAACAATGTGATGGCAGGTGCTATGGACCCTACGTTAGTGACTGCTGCCATCGAGAAT
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GCAAAGTACACGTATGGAGCATTCTGTGTTAAGAAATGTCCACATAACTTCGTGGTAGATTCCAGTTCTT
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AGAAGAGCTGAGAATTGTACTGCTGAAGGCATGGTATGCAACCACCTGTGTTCAAATGATGGTTGTTGGG

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GACCTGGGCCGGACCAGTGCCTGTCATGTCGGCGCTTCAGCAGGGGAAAGATCTGCATAGAGTCTTGCAA
CCTTTATGATGGGGAATTTCGAGAGTTTGAAAACGGCTCCATCTGTGTTGAGTGTGACTCCCAGTGTGAG
AAAATGGAAGATGGACTCCTCACATGCCATGGACCGGGACCTGACAACTGCACAAAGTGCTCTCATTTTA
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ATCATGGCAAGTATGGATCACCCACACCTAGTTCGCCTATTGGGAGTGTGTCTGAGTCCCACTATCCAGT
TGGTTACGCAGCTGATGCCGCATGGCTGCCTACTGGACTATGTTCATGAACACAAGGATAACATTGGATC
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CATCGGGATCTGGCAGCCCGCAATGTCTTAGTGAAATCTCCAAATCATGTTAAAATCACAGATTTTGGAC
TGGCCCCGGCTCTTGGAAGGAGATGAAAAAGAATACAATGCTGATGGTGGCAAGATGCCAATTAAATGGAT
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AGAAAGGAGAGCGTCTGCCTCAGCCTCCCATCTGCACTATTGATGTTTACATGGTCATGGTCAAATGTTG
GATGATCGATGCTGACAGCAGACCTAAATTCAAAGAACTGGCTGCTGAGTTTTCAAGAATGGCTAGAGAC
CCTCAAAGATACCTAGTTATTCAGGGTGATGATCGTATGAAGCTTCCCAGTCCAAATGACAGCAAATTCT
TCCAGAATCTCTTGGATGAAGAGGATTTGGAAGACATGATGGATGCTGAGGAATATTTGGTCCCCCAGGC
TTTCAACATACCTCCTCCCATCTACACATCCAGAACAAGAATTGACTCCAATAGGAATCAGTTTGTGTAC
CAAGATGGGGGCTTTGCTACACAACAAGGAATGCCCATGCCCTACAGAGCCACAACCAGCACCATACCAG
AGGCTCCAGTAGCTCAGGGTGCAACGGCTGAGATGTTTGATGACTCCTGCTGTAATGGTACCCTACGAAA
GCCAGTGGCACCCCATGTCCAAGAGGACAGTAGCACTCAGAGGTATAGTGCTGATCCCACAGTGTTCGCC
CCAGAACGGAATCCTCGAGGAGAACTGGATGAAGAAGGCTACATGACTCCAATGCATGACAAGCCCAAAC
AAGAATATCTGAATCCTGTGGAAGAGAACCCTTTTGTGTCCCGAAGGAAGAATGGAGATCTTCAAGCTTT
AGATAATCCGGAGTATCACAGTGCTTCCAGCGGTCCACCCAAGGCGGAGGATGAATACGTGAATGAGCCT
CTATACCTCAACACCTTCGCCAATGCCTTGGGGAGTGCAGAGTACATGAAAAACAGTGTACTGTCTGTGC
CAGAGAAAGCCAAGAAAGCATTTGACAACCCCGACTACTGGAACCACAGCCTGCCACCCCGGAGCACCCT
TCAGCACCCAGACTACCTGCAGGAATACAGCACAAAATATTTTTATAAACAGAATGGACGGATCCGCCCC
ATTGTGGCAGAGAATCCTGAGTACCTCTCGGAGTTCTCGCTGAAGCCTGGCACTATGCTGCCCCCTCCGC
CCTACAGACACCGGAATACTGTGGTGTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	SgfI-MluI
ACCN:	NM_010154
Insert Size:	3879 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:	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_010154.2, NP_034284.1
RefSeq Size:	12037 bp
RefSeq ORF:	3879 bp
Locus ID:	13869
UniProt ID:	Q61527
Cytogenetics:	1 33.8 cM

Gene Summary: Tyrosine-protein kinase that plays an essential role as cell surface receptor for neuregulins and EGF family members and regulates development of the heart, the central nervous system and the mammary gland, gene transcription, cell proliferation, differentiation, migration and apoptosis. Required for normal cardiac muscle differentiation during embryonic development, and for postnatal cardiomyocyte proliferation. Required for normal development of the embryonic central nervous system, especially for normal neural crest cell migration and normal axon guidance. Required for mammary gland differentiation, induction of milk proteins and lactation. Acts as cell-surface receptor for the neuregulins NRG1, NRG2, NRG3 and NRG4 and the EGF family members BTC, EREG and HBEGF. Ligand binding triggers receptor dimerization and autophosphorylation at specific tyrosine residues that then serve as binding sites for scaffold proteins and effectors. Ligand specificity and signaling is modulated by alternative splicing, proteolytic processing, and by the formation of heterodimers with other ERBB family members, thereby creating multiple combinations of intracellular phosphotyrosines that trigger ligand- and context-specific cellular responses. Mediates phosphorylation of SHC1 and activation of the MAP kinases MAPK1/ERK2 and MAPK3/ERK1. Isoform JM-A CYT-1 and isoform JM-B CYT-1 phosphorylate PIK3R1, leading to the activation of phosphatidylinositol 3-kinase and AKT1 and protect cells against apoptosis. Isoform JM-A CYT-1 and isoform JM-B CYT-1 mediate reorganization of the actin cytoskeleton and promote cell migration in response to NRG1. Isoform JM-A CYT-2 and isoform JM-B CYT-2 lack the phosphotyrosine that mediates interaction with PIK3R1, and hence do not phosphorylate PIK3R1, do not protect cells against apoptosis, and do not promote reorganization of the actin cytoskeleton and cell migration. Proteolytic processing of isoform JM-A CYT-1 and isoform JM-A CYT-2 gives rise to the corresponding soluble intracellular domains (4ICD) that translocate to the nucleus, promote nuclear import of STAT5A, activation of STAT5A, mammary epithelium differentiation, cell proliferation and activation of gene expression. The ERBB4 soluble intracellular domains (4ICD) colocalize with STAT5A at the CSN2 promoter to regulate transcription of milk proteins during lactation. The ERBB4 soluble intracellular domains can also translocate to mitochondria and promote apoptosis. [UniProtKB/Swiss-Prot Function]