

Product datasheet for **MG209803**

Egfr (BC023729) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Egfr (BC023729) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Egfr
Synonyms:	9030024J15Rik; AI552599; Erbb; Errb1; Errp; wa-2; wa2; Wa5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG209803 representing BC023729
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCGACCCTCAGGGACCGGAGAACCACACTGCTGGTGTGCTGACCGCGCTCTGCGCCGAGGTGGG
 CGTTGGAGGAAAAGAAAGTCTGCCAAGGCACAAGTAACAGGCTCACCCAAGTGGCACTTTTGAAGACCA
 CTTTCTGAGCCTGCAGAGGATGTACAACAAGTGAAGTGGTCTTGGGAAGTGGAAATACCTATGTG
 CAAAGGAATTACGACCTTCTCTTAAAGACCATCCAGGAGGTGGCCGGCTATGTCCTCATTGCCCTCA
 ACACCGTGGAGAGAATCCCTTTGGAGAAGTGCAGATCATCAGGGGAAATGCTCTTTATGAAAACACCTA
 TGCCTTAGCCATCTGTCCAAGTATGGGACAAACAGAAGTGGGCTTAGGGAACTGCCATGCGGAACCTA
 CAGGAAATCCTGATTGGTGTGCGATTGAGCAACAACCCATCCTCTGCAATATGGATACTATCCAGT
 GGAGGGACATCGTCCAAAACGTCTTTATGAGCAACATGTCAATGGACTTACAGAGCCATCCGAGCAGTTG
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 ACCAAAATCATCTGTGCCAGCAATGTTCCCATCGCTGTGCTGGCAGGTCCCCCAGTGACTGCTGCCACA
 ACCAATGTGCTGCGGGGTGTACAGGGCCCCGAGAGAGTACTGTCTGGTCTGCCAAAAGTCCAAGATGA
 GGCCACATGCAAAGACACCTGCCACCCTCATGCTGTACAACCCACCACCTATCAGATGGATGTCAAC
 CCTGAAGGGAAGTACAGCTTTGGTGCCACCTGTGTGAAGAAGTGGCCCGAAACTACGTGGTGACAGATC
 ATGGCTCATGTGTCGAGCCTGTGGCCTGACTACTACGAAGTGAAGAAGATGGCATCCGCAAGTGTA
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 AAATTTGTGCTACGAAACACAATAAACTGGAAAAAACTCTCGGGACACCCAATCAGAAAACAAAATC
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 GCTGCTGGGGCCCTGAGCCAGGACTGTGCTCCTGCCAGAATGTGAGCAGAGGAGGGAGTGCCTGGA
 GAAATGCAACATCCTGGAGGGGAACCAAGGGAGTTTGTGAAAATCTGAATGCATCCAGTGCCATCCA
 GAATGTCTGCCCCAGGCCATGAACATCACCTGTACAGGCAGGGGACCAGACAAGTGCATCCAGTGTGCC
 ACTACATTGATGGCCCACTGTGTCAAGACCTGCCAGCTGGCATCATGGGAGAGAACAACACTCTGGT
 CTGGAAGTATGCAGATGCCAATAATGTCTGCCACCTATGCCACGCCAACTGTACCTATGGATGTGCTGGG
 CCAGGTCTTAAGGATGTGAAGTGTGGCCATCTGGGTACGTTCAATGGCAGTGGATCTTAAAGACCTTTT
 GGATC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG209803 representing BC023729
Red=Cloning site Green=Tags(s)

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MRPSGTARTTLLVLLTALCAAGGALEEKKVCQGTSNRLTQLGTFEDHFLSLQRMYNCEVVLGNLEITYV
QRNYDLSFLKTIQEVAGYVLIALNTVERIPLNLQIIRGNALYENTYALAILSNYGTNRTGLRELPMRNL
QEILIGAVRFSNNPILCNMDTIQWRDIVQNVFMSNMSMDLQSHPSSCPCKDCPSCPNGSCWGGEEENCQKL
TKIICAQQCSHRRCGRSPSDCCHNQCAAGCTGPRESDCLVCQKFQDEATCKDTCPLMLYNPTTYQMDVN
PEGKYSFGATCVKCKPRNYVVDHGSCVRACGPDYVEEEDGIRKCKKCDGPCRKVCNGIGIGEFKDTLS
INATNIKHFKYCTAISGDLHILPVAFKGDSTRTPLDPRELEILKTVKEITGFLLIQAWPDNWTDLHAF
ENLEIIRGRKQHGQFSLAVVGLNITSLGLRSLKEISDGDVIIISGNRNLCYANTINWKKLFGTPNQKTKI
MNNRAEKDCKAVNHVCNPLCSSEGCWGPEDRCVSCQNVSRGECVCKNILEGEPREFVENSECIQCHP
ECLPQAMNITCTGRGPDNCIQCAHYIDGPHCVKTCAPAGIMGENNTLVWKYADANNVCHLCHANCTYGCAG
PGLQGCEVWPSGYVQWQWILKTFWI
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: BC023729

ORF Size: 1965 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: [BC023729](#), [AAH23729](#)

RefSeq Size: 2666 bp

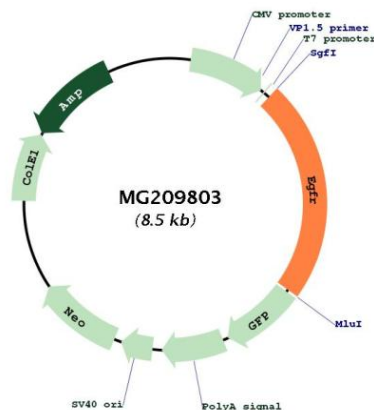
RefSeq ORF: 1967 bp

Locus ID: 13649

Cytogenetics: 11 9.41 cM

Gene Summary: Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses (PubMed:8404850). Known ligands include EGF, TGFA/TGF-alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF. Ligand binding triggers receptor homo- and/or heterodimerization and autophosphorylation on key cytoplasmic residues. The phosphorylated receptor recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascades. Activates at least 4 major downstream signaling cascades including the RAS-RAF-MEK-ERK, PI3 kinase-AKT, PLCgamma-PKC and STATs modules. May also activate the NF-kappa-B signaling cascade. Also directly phosphorylates other proteins like RGS16, activating its GTPase activity and probably coupling the EGF receptor signaling to the G protein-coupled receptor signaling. Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (By similarity). Plays a role in enhancing learning and memory performance (PubMed:20639532).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG209803