

Product datasheet for **MR220921**

Fer (NM_001037997) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Fer (NM_001037997) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Fer
Synonyms:	AV082135; C330004K01Rik; Fert; Fert2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR220921 representing NM_001037997
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGATTTGGGAGTGACCTGAAGAAGCTGTGTTAAAGTTGCAAGACTGGGAACACGGT
 TGCTGGAGACAGTGAAGAAATTTATGGCTCTGAGAATAAAGAGTGATAAAGAATATGCATATACTCTACA
 GAATCTTTGTAATCAAGTTGATAAAGAAAAGCACTGTGCAAGTGAATTATGTCAGCAACGTGTCCAAGTCT
 TGGCTACTGATGATTCAGCAGACAGAAGCAGCTTAGTAGGATAATGAAGACACATGCAGAGGACTTGAAC
 CTGGACCTTGCACAGGCTCACCATGATGATCAAGGACAAGCAGCAAGTGAAGAAGAGCTATGTAGGCAT
 TCATCAACAGATAGAGGCAGAGATGATCAAGGTCACAAAGACAGAATTGGAGAAATTAATCCAGCTAT
 CGACAATTAATAAAGAAATGAATTCGCCAAAGAGAAAATAAAGAAGCCTTAGCGAAAGGGAAGGAAA
 CAGAAAAGGCCAAGGAGCGCTATGACAAAGCTACAATGAAGCTTCATATGCTGCATAATCAGTATGTGTT
 GGCCTGAAGGGGCACAGCTCCATCAGAGCCAGTACTATGATACCACACTTCTCTGCTGCTGGACTCC
 GTGCAAAAGATGCAAGAAGAAATGATAAAAGCACTAAAAGGTATATTTGATGACTATAGCCAGATAACCA
 GCCTTGTTACAGAGGAAATAGTGAATGTCCATAAAGAGATTCAAATGTCTGTTGAACAGATAGACCCTAG
 CACCGAATATAATAATTTTATAGATGTTTACAGAAACAGCTGCTAAAGAAACAGAAATCGAATTTGAT
 ACTTCCCTATTAGAAGAAATGAAAATCTTCAGGCAATGAGATCATGTGGAATAATTTAACAGCAGACA
 GTTTGCAAGTCAATGTTGAAGACTTTAGCGGAAGAGCTCACACAGACCCAGCAGATGCTTTTACACAAGGA
 GGCGGCCGCTCTGGAGCTAGAGAAGAGGATTGAAGAATCTTTGAGACCTGTGAAAAGAAGTCTGACATT
 GTGCTTCTCTGGGCCAAAACAGGCACCTTGAAGAGTTGAAACAGTCAGTCCAGCAGTTGCGATGCACCTG
 AGGCAAGTGTGCAGCACAGAAAGCTTTGCTGGAGCAAAAAGTACAGGAAAATGATGGGAAAGAACCACC
 TCCTGTGGTGAATTACGAAGAAGACCGCGGTCAGTCACATCCATGGAAAAGAAAGGAGAGGCTATCCAAA
 TTTGAGTCTATTCGTCATTCAATTGCTGGGATAATTAAGTCTCCAAAGTCGGTACTCGGATCTTCAACAC
 AGGTGTGTGATGTGATCTCTGTGGTGAGAGGCCCTGGCGGAGCATGACTGGTACCATGGTGCCATCCC
 CAGGATAGAGGCACAGGAACTGCTGAAGCAGCAAGGAGACTTCTGGTGCAGGAGGCCATGGGAAACCT
 GGTGAATATGTCCTTTCTGTATTTCTGACGGACAAGGAGGCACCTTATCATACAATTTGTCGATAATC
 TGTATCGATTGAGGGCACCGGTTTTTCAAACATTCACAGCTTATAGATCACCCTTCAATACAAAGCA
 AGTCATCACCAAGAAGTCTGGGGTGGTTCTGCTCAACCCATCCCAAAGGATAAGAAATGGGTTCTCAAT
 CATGAAGATGTTTCAATGGGAGAATTACTGGGCAAGGGGAATTTTGGTGAAGTATAAGGGCACACTAA
 AGGATAAAACTCCTGTTGCCATTAACAGTGAAGGAAGACCTTCTCAGGAATTAATAAAGTTTCT
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 AGACAGCTGTCTACATCATTATGGAAGTGGTCCCAGGGGGTATTTTCTGACCTTCTGAGGAAGAGGA
 AGGACGAGCTGAAGCTGAAGCAGTTGGTGGAGATTTTCTTGGACGTTGCTGCTGGCATGTTGTATCTCGA
 GAGCAAGAAGTGCATTACAGGGACCTGGCTGCACGGAAGTGCCTGGTGGGTGAAAATAACTCTGAAA
 ATCAGTGACTTTGGAATGTCTCGCAAGAAGACGGTGGAGTGATTCATCTTCTGGCTTAAAGCAGATTC
 CTATTAATGGACAGCACCGGAAGCTCTAATTTATGGGAGATACAGTTCTGAAAGTGACGTGTGGAGCTT
 CGGATCCTCCTCTGGGAGACCTCAGCCTAGGAGTCTGCCGTACCCTGGAATGACAAACCAGCAAGCG
 CGAGAGCAAGTGGAGAGAGGATACCGGATGTGAGCCCAACAGAACTGTCCAGAGGAGGTTTTTACAATCA
 TGATGAAGTGTGGGATTACAAGCCTGAAAACCGCCCTAAGTTCAACGACCTTCAAAAGAGCTCACTGT
 CATCAAGAAGATGATCACA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR220921 representing NM_001037997
 Red=Cloning site Green=Tags(s)

MGFGSDLKNSQEAVLKLQDWELRLLLETVKKFMALRIKSDKEYAYTLQNLGNQVDKESTVQVNYVSNVSKS
 WLLMIQQTEQLSRIMKTHAEDLNSGPLHRLTMMIKDKQQVKKSYVGIHQQIEAEMIKVTKTELEKLKSSY
 RQLIKEMNSAKEKYKEALAKGKETEKAKERYDKATMKLHMLHNQYVLAALKGAQLHQSQYYDTTLPPLLD
 VQKMQEEMIKALKGIFDDYSQITSLVTEEIVNVHKEIQMSVEQIDPSTEYNNFIDVHRTTAAKEQIEFD
 TSLLEENENLQANEIMWNNLTADSLQVMLKTLAEELTQTQQMLLHKEAAVLELEKRIEESFETCEKKSDI
 VLLLGGKQALEELKQSVQQLRCTEAKCAAQKALLEQKVQENDGKPPPVVNYEEDARSVTSMERKERSK
 FESIRHSIAGIIKSPKSVLGSSTQVCDVISVGERPLAEHDWYHGAIPRIEAQELLKQQGDFLVRESHGKP
 GEYVLSVYSDGQRRHFIIQFVDNLYRFEGTGFSNIPQLIDHHFNTKQVITKKSGLVLLNPIPDKKWWLN
 HEDVSLGELLGKGNFGEVYKGLKDKTPVAIKTCKEDLPQELKIKFLQEAKILKQYDHPNIVKLIQVCTQ
 RQPVYIIMELVPGGDFLTF LRKRKDELKQLVRFSLDVAAGMLYLESKNCIHRDLAARNCLVGENNTLK
 ISDFGMSRQEDGGVYSSSGLKQIPKWTAPEALNYGRYSSESDVWSFGILLWETFSLGVCPPYGMTNQQA
 REQVERGYRMSAPQNCPEEVFTIMMKCWDYKPNRPFNDLHKELTVIKKMIT

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_001037997

ORF Size: 2469 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_001037997.3](#), [NP_001033086.2](#)

RefSeq Size: 3026 bp

RefSeq ORF: 2472 bp

Locus ID: 14158

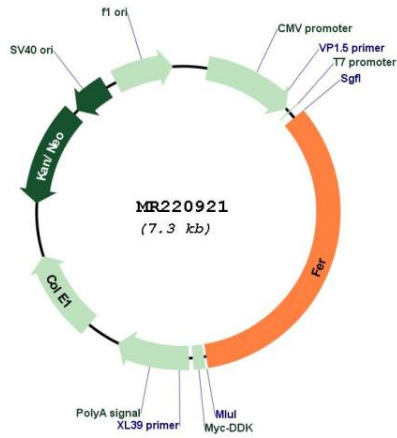
UniProt ID: [P70451](#)

Cytogenetics: 17 E1.1

MW: 95 kDa

Gene Summary: Tyrosine-protein kinase that acts downstream of cell surface receptors for growth factors and plays a role in the regulation of the actin cytoskeleton, microtubule assembly, lamellipodia formation, cell adhesion, cell migration and chemotaxis. Acts downstream of EGFR, KIT, PDGFRA and PDGFRB. Acts downstream of EGFR to promote activation of NF-kappa-B and cell proliferation. May play a role in the regulation of the mitotic cell cycle. Plays a role in the insulin receptor signaling pathway and in activation of phosphatidylinositol 3-kinase. Acts downstream of the activated FCER1 receptor and plays a role in FCER1 (high affinity immunoglobulin epsilon receptor)-mediated signaling in mast cells. Plays a role in the regulation of mast cell degranulation. Plays a role in leukocyte recruitment and diapedesis in response to bacterial lipopolysaccharide (LPS). Phosphorylates CTTN, CTNND1, PTK2/FAK1, GAB1, PECAM1 and PTPN11. May phosphorylate JUP and PTPN1. Can phosphorylate STAT3 according to PubMed:10878010 and PubMed:19159681, but clearly plays a redundant role in STAT3 phosphorylation. According to PubMed:11134346, cells where wild type FER has been replaced by a kinase-dead mutant show no reduction in STAT3 phosphorylation. Phosphorylates TMF1. Isoform 3 lacks kinase activity.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR220921