

## Product datasheet for MR225716

### Flt1 (NM\_010228) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Flt1 (NM_010228) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Flt1
Synonyms:	AI323757; Flt-1; sFlt1; VEGFR-1; VEGFR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR225716 representing NM_010228 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGTCAGCTGCTGGGACACCGGGTCTTGCCCTACGCGCTGCTCGGGTGTCTGCTTCTCACAGGATATG  
GCTCAGGGTCGAAGTTAAAAGTGCCTGAAGTGAAGTTAAAAGGCACCCAGCATGTCATGCAAGCAGGCCA  
GACTCTCTTTCTCAAGTGCAGAGGGGAGGCAGCCACTCATGGTCTCTGCCACGACCGTGAGCCAGGAG  
GACAAAAGGCTGAGCATCACTCCCCATCGGCCTGTGGGAGGGATAACAGGCAATTCTGCAGCACCTTGA  
CCTTGGACACGGCGCAGGCCAACACACGGCCCTACACCTGTAGATACCTCCCTACATCTACTCTCGAA  
GAAAAAGAAAGCGGAATCTTCAATCTACATATTTGTTAGTGATGCAGGGAGTCCCTTCATAGAGATGCAC  
ACTGACATACCCAACTTGTGCACATGACGGAAGGAAAGACAGCTCATCATCCCCTGCCGGGTGACGTCC  
CCAACGTACAGTCACCCATAAAAAAGTTTCCATTTGATACTCTTACCCTGATGGGCAAAGAATAACATG  
GGACAGTAGGAGAGGCTTTATAATAGCAAATGCAACGTACAAAGAGATAGGACTGCTGAAGTCCGAAAGCC  
ACCGTCAACGGGCACCTGTACCAGACAACTATCTGACCCATCGGCAGACCAATAACAATCCTAGATGTCC  
AAATACGCCCGCCGAGCCAGTGAAGTGTCCACGGGCAGACTTGTCTCACTGCACCGCCACCAC  
GGAGCTCAATACGAGGGTGCAAATGAGCTGGAATTACCCTGGTAAAGCAACTAAGAGAGCATCTATAAGG  
CAGCGGATTGACCGGAGCCATTTCCACAACAATGTGTTCCACAGTGTCTTAAGATCAACAATGTGGGAG  
GCCGAGACAAGGGCTCTACACCTGTCCGCTGAAGAGTGGTCCCTCGTTCCAGTCTTCAACACCTCCGT  
GCATGTGTATGAAAAAGGATTATCAGTGTGAAACATCGGAAGCAGCCGGTGCAGGAAACCACAGCAGGA  
AGACGGTCTATCGGCTGTCCATGAAAGTGAAGGCCTTCCCCTCCCAGAAATCGTATGGTTAAAAGATG  
GCTCGCTGCAACATTGAAGTCTGCTCGCTATTTGGTACATGGCTACTCATTAAATATCAAAGATGTGAC  
AACCGAGGATGCAGGGGACTATACGATCTTGTGGGCATAAAGCAGTCAAGGCTATTTAAAAACCTCACT  
GCCACTCTATTGTAACGTGAAACCTCAGATCTACGAAAAGTCCGTGTCCTCGCTTCAAGCCACCTC  
TCTATCCGCTGGGCAGCAGACAAGTCTCACTTGACCCGTGTATGGCATCCCTCGGCCAACAAATCACGTG  
GCTCTGGCACCCCTGTCACCACAATCACTCCAAGAAAGGTATGACTTCTGCACTGAGAATGAAGAAATCC



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TTTATCCTGGATCCCAGCAGCAACTTAGGAAACAGAATTGAGAGCATCTCTCAGCGCATGACGGTCATAG  
AAGGAACAAATAAGACGGTTAGCACATTGGTGGTGGCTGACTCTCAGACCCTGGAATCTACAGTGCCG  
GGCCTTCAATAAAATAGGGACTGTGAAAGAAACATAAAATTTTATGTCACAGATGTGCCGAATGGCTTT  
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TGAAAGAGGGGGCCACAGCCAGTGAGTACAAGCTCTGATGACCGAACTCAAGATCTTGACCCACATCGG  
CCATCATCTGAATGTGGTTAACCTCCTGGGAGCCTGCACGAAGCAAGGAGGGCCTCTGATGGTGATCGTG  
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ACGCAGCCTTGATATGGAGCTCAAGAAAGAGAGCCTGGAACAGGCCTGGAGCAGGGCCAGAAGCCCCG  
CCTAGACAGTGTACAGCAGCTCAAGTGTACCAGCTCCAGCTTCCCTGAAGACCGAAGCGTGAGCGATGTG  
GAAGGAGACGAGGATTACAGTGAGATCTCAAGCAGCCCTCACCATGGAAGACCTGATTTCTACAGTT  
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CATCCTTTTATCTGAGAACAATGTGGTGAAGATTTGCGACTTTGGCCTGGCCCGGATATTATAAGAAC  
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GGCCCCGTTTGTGAACTTGTGGAGAACTTGGTGACCTGCTTCAAGCCAACGTCCAACAGGATGGGAA  
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GAGGACCTTTTCAAGGACGGCTTTGCAGATCCACATTTTCATTCCGGAAGCTCTGATGATGTGAGATATG  
TAAACGCTTTCAAATTCATGAGCCTGGAAGAATCAAAACCTTTGAGGAGCTTTCACCGAACTCCACCTC  
CATGTTTGAGGACTATCAGCTGGACACTAGCACTCTGCTGGGCTCCCCCTTGTGAAGCGGTTACCTGG  
ACTGAGACCAAGCCCAAGGCCTCCATGAAGATAGACTTGAGAATAGCGAGTAAAAGCAAGGAGGCGGGAC  
TTTCCGATCTGCCGAGGCCAGCTTCTGCTTCTCCAGCTGTGGCCACATCAGGCCGTGCAGGACGATGA  
ATCTGAGCTGGGAAAGGAGTCTGCTGTCTCCACCCCAAGACTACAACCTCCGTGGTGTGTACTCTCTCC  
CCGCCCGCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR225716 representing NM\_010228  
 Red=Cloning site Green=Tags(s)

MVSCWDTAVLPYALLGCLLLTGYGSGSKLVPELSLKGTHVMQAGQTLFLKCRGEEAAHSWSLPTTVSQE  
 DKRLSITPPSACGRDNRQFCSTLTLDTAQANHTGLYTCRYLPTSTSKKKAESSIYIFVSDAGSPFIEMH  
 TDIPKLVHMTGRQLIIPCRVTSNVTVTLKKFPFDLTPDGQRITWDSRRGFIIANATYKEIGLLNCEA  
 TVNGHLYQTNYLTHRQNTILDVQIRPPSPVRLHLHGQTLVLNCTATTELNTRVQMSWNPYKATKRASIR  
 QRIDRSHSHNNVFHSLKINNVESTRDKGLYTCRVKSGSSFQSFNTSVHVYEKGFISVKHRKQPVQETTAG  
 RRSYRLSMKVKAFFSPEIIVLKDGPATLKSARYLVHGYSLIIKDVTTEDAGDYIILLGIKQSRLFKNLT  
 ATLIVNVKQIYEKSVSSLPSPLYPLGSRQVLTCTVYGIPTITWLVHPCHHNHSEKERYDFCTENES  
 FILDPSNLGNRIESISQRMVIEGNTKTVSTLVVADSQTPGIYSCRAFNIKGTVERNIFVYTDVPNGF  
 HVSLEKMPAEGEDLKLSCVVKFLYRDITWILLRTVNNRMTMHSISKQKMATTDQYSITLNLVIKNVLE  
 DSGTYACRARNIYTGEDILRKTEVLVRDSEAPHLQNLSDYEVISGSTLDCQARGVPAPQITWFKNNH  
 KIQQEPGIILGPGNSTLFIERVTEDEGVYRCRATNQGAVESAAYLTVQGTSDKSNLELITLTCTCVAA  
 TLFWLLTLFIRKLRSSSEVKTDYLSIIMDPDEVPLDEQCERLPYDASKWEFARERLKLKSLGRGAFG  
 KVVQASAFGIKKSPTCRTVAVKMLKEGATASEYKALMTELKILTHIGHHLNVVNLGACTKQGGPLMVIV  
 EYCKYGNLSNYLKSQRDLFCLNKDAALHMLKKESELEPGLQGGKPRLDSVSSSVTSSSPEDRSVSDV  
 EGDEDYSEISKQPLTMEDLISYSFQVARGMEFLSSRKCIHRDLAARNILLSENNVVKICDFGLARDIYKN  
 PDYVRRGDRPLKWMAPESIFDKVYSTKSDVWSYGVLLWEIFSLGGSPYPGVQMDDFCSRLKEGMRMR  
 TPEYATPEIYQIMLDCWHKDPKERPRFAELVEKGLDLQANVQDQGDYIPLNAILTRNSGFTYSTPTFS  
 EDLFDKGFADPHFHSGSSDDVRYVNAFKFMSLERIKTFFELSPNSTSMFEDYQLDSTLLGSPLLKRFTW  
 TETPKASKMIDLRIASKSKEAGLSDLRPSFCFSSCGHIRPVQDDESELGKESCCSPPDYNSVLYSS  
 PPA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

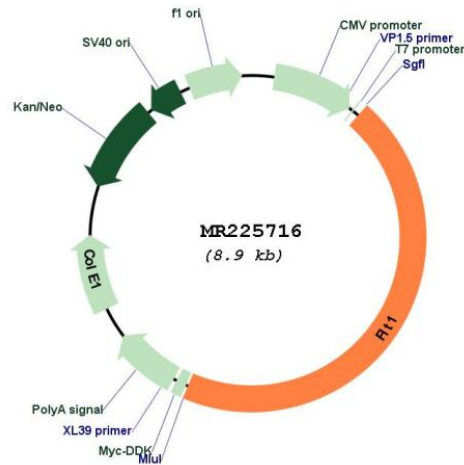
SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_010228

**ORF Size:** 3999 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\\_010228.4](#)

**RefSeq Size:** 6280 bp

**RefSeq ORF:** 4002 bp

**Locus ID:** 14254

**UniProt ID:** [P35969](#)

**Cytogenetics:** 5 87.01 cM

**MW:** 150.3 kDa

**Gene Summary:** Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFA, VEGFB and PGF, and plays an essential role in the development of embryonic vasculature, the regulation of angiogenesis, cell survival, cell migration, macrophage function, chemotaxis, and cancer cell invasion. May play an essential role as a negative regulator of embryonic angiogenesis by inhibiting excessive proliferation of endothelial cells. Can promote endothelial cell proliferation, survival and angiogenesis in adulthood. Its function in promoting cell proliferation seems to be cell-type specific. Promotes PGF-mediated proliferation of endothelial cells, and proliferation of some types of cancer cells, but does not promote proliferation of normal fibroblasts. Has very high affinity for VEGFA and relatively low protein kinase activity; may function as a negative regulator of VEGFA signaling by limiting the amount of free VEGFA and preventing its binding to KDR. Modulates KDR signaling by forming heterodimers with KDR. Ligand binding leads to the activation of several signaling cascades. Activation of PLCG leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate and the activation of protein kinase C. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leading to the activation of phosphatidylinositol kinase and the downstream signaling pathway. Mediates activation of MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Phosphorylates SRC, YES1 and PLCG, and may also phosphorylate CBL. Promotes phosphorylation of AKT1 and PTK2/FAK1 (By similarity). [UniProtKB/Swiss-Prot Function]