

## Product datasheet for **MR222378**

### **Kirrel3 (NM\_001190911) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Kirrel3 (NM_001190911) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kirrel3
Synonyms:	1500010O20Rik; 2900036G11Rik; mKIAA1867; NEPH2; SST4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR222378 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGAGACCTTTCCAGCTGGATTTGCTCTTCTCTGCTTCTTCTCAGTCAAGAGCTTGGCCTCCAGA  
 AGAGAGGATGCTGTCTGGTACTGGGCTACATGGCCAAGGACAAGTTTCGGAGAATGAATGAAGGTCAAGT  
 CTACTCCTTCAGCCAGCAACCCAGGACCAAGTGGTGGTGTGAGGACAGCCAGTACTCTGCTGTGTGCC  
 ATCCCTGAATATGATGGCTTCGTCTGTGGATCAAAGATGGCTTGGCTCTGGGTGTAGGCAGAGACCTCT  
 CAAGTTACCCCACTACCTGGTGGTGGGAACACCTCTCAGGAGAGCATCACCTGAAGATCCTGAGGGC  
 TGAGTTCAGGATGATGCCGTGTATGAGTGCCAGGCCATCCAGGCTGCCATCCGGTCCCGCCCTGCACGC  
 CTCACCGTCTGGTGCCACCAGATGACCCATCATCTAGGGGGGCTGTGATCAGCCTTCGGGACGGGG  
 ACCCCCTCAACCTCACCTGCCACGCAGACAATGCCAAGCCTGCGGCTTCATCATCTGGTACGTAAGG  
 AGAGGTCAATGAGGACCACTACTCCAAGACCTGCTTCGAGACGGCAAACGAGAAAGCATTGTGAGC  
 ACCCTCTTCATCTCCCCAGGAGAGCTGGAAAATGGACAGAGTATTGTGTGCCGAGCCACCAACAAAGCCA  
 TCCCCGGAGGAAAAGAGACCTCTGTCCACATAGACATCCAGCATCCACCGCTTGTCAACTTGTCCGTGGA  
 ACCACAGCCGGTATTGGAGGACAACATCGTCACGTTCCACTGCTCTGCAAAGGCCAACCCAGCTGTACCC  
 CAGTACAGGTGGGCCAAACGGGGTACATCATCAAGGAGGCATCTGGGGAGCTGTATAGGACCACGGTGG  
 ACTACACATACTCTCAGAGCCTGTATCCTGTGAAGTAACCAATGCCCTGGGCAGCACCAACCTCAGCCG  
 CACAGTGGATGTACTTCGGTCTCGAATGACCTCAGAGCCTCAGTCACTGCTGGTAGACTGAGGCTCCG  
 GATGCTGTCTCAGCTGTGCGTGGATCGGAACCCGCTCTGACCATCGTGTGGATGAAACGAGGTTCTG  
 GTGTGGTCTGAGCAATGAAAAGACCCTAACCCCAAATCTGTCCGCCAAGAGGATGCTGGGAAGTACCG  
 GTGCCGGCTGTGGTGCCCGGGTAGGAGCTGGGGAGAGAGAGGTGACCTTGACTGTCAATGGACCCCC  
 ATCATCTCCAGCACAGACCCAGCACGCCCTCCACGGAGAGAAGGGCCAGATCAATGTTTCATCCGGA  
 GCACACCACCGCTGACCGAATTGCCTGGTCTGGAAGGAGAATGTGCTGGAGTCAGGGACATCAGGGCG  
 CTACACAGTGGAGACGGTGAACACGGAGGAGGAGTCACTCCACATTGACCATTAGCAACATTGTGCGT  
 GCTGACTTCCAGACCATAACAACGTACAGCCTGGAACAGCTTTGGCTCTGACACAGAGATCATCCGAC  
 TCAAGGAACAAGGTTCCGAAAATGAAGTCGGGAGCCGGCTGGAAGCAGAGTCTGTACCAATGGCCGTCAT  
 CATCGGGTGGCCGTAGGAGCTGGCGTGGCCTTCTCGTCTAATGGCAACCATTGTGCCCTTCTGCTGT  
 GCCGTTCCAGAGAAATCTCAAAGGTGTGTATCAGCCAAAAATGATATTCGAGTGGAAATTGTGCACA  
 AGGAGCCATCTTCTGGCCGGGAGGCTGAGGACCACACCACATAAAGCAGCTGATGATGGACCGGGTGA  
 ATTCACAAAGACTCGGTGCTGAAACAGCTGGAGTCTCAAAGAAGAGGAGAAGGAGTTTCAGAACCTG  
 AAGGACCCACCAACGGCTACTACAGCCTCAACACCTTCAAAGAACCATTCAACTCCAACCATCTCCC  
 TGTCCAGCTGCCAGCCAGACCTGCGTCCGACAGGCAAACAGCGTGTGCCACAGGCATGTCTTCACCAA  
 CATCTACAGCACCTTGAGCGGCCAGGGCCGCTCTACGACTATGGACAGAGGTTTGTGCTGGGCATGGGC  
 AGCTCTTCCATTGAGCTTTGTGAGCGGGAGTTTCAGAGGGGCTCCCTCAGCGACAGCAGCTCCTTCTGG  
 ACACGCAGTGTGACAGCAGCGTCAGCAGCAGCGCAAGCAAGATGGCTACGTGCAGTTTGACAAGGCCAG  
 CAAGGCTTCTGCCTCTTCCCACCATTCCCAGTCTCTTCCCAGAACTCCGACCCAGCCGACCCCTG  
 CAGCGGCCGATGCAGACTCACGTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR222378 protein sequence  
 Red=Cloning site Green=Tags(s)

MRPFQLDLLFLCFFLFSQELGLQKRGCCCLVLGYMAKDKFRRMNEGQVYSFSQQPQDQVVVSGQPVTLLCA  
 IPEYDGFVLWIKDGLALGVGRDLSSYPQYL VVGNHLSGEHHLKILRAELQDDAVYECQAIQAAIRSRPAR  
 LTVLVPPDDPIILGGPVISLRAGDPLNLTCHADNAKPAASIIWLRKGEVINGATYSKTLRLDGGKRESIVS  
 TLFISPGDVENGQSIVC RATNKAIPGGKETSVTIDIQHPPLVNL SVEPQPVLEDNIVTFHCSAKANPAVT  
 QYRWAKRGHIIKEASGELYRTTVDYTYFSEPVSCVTNALGSTNLSRTVDVYFGPRMTSEPOQLLVDLGS  
 DAVFSCAWIGNPSLTI VWMKRGSGVVL SNEKTLTLKSVRQEDAGKYVCRAVVP RVGAGEREVT LTVNGPP  
 IISSTQTQHALHGEKGQIKCFIRSTPPPDRIAWSKENVLESGTSGRYTVETVNTTEEGVISTLTISNIVR  
 ADFQTIYNCTAWNSFGSDTEIIRLKEQGSEMKS GAGLEAESVPMAVIIGVAVGAGVAFVLMATIVAFCC  
 ARSQRNLKGVVSAKNDIRVEIVHKEPSSGREADHTTIKQLMMDRGEFQQDSVLKQLEVLKEEKEFQNL  
 KDPTNGYYSVNTFKKEHSTPTISLSSCQPDLRPTGKQRVPTGMSFTNIYSTLSGQGRLYDYGQRFVLMGM  
 SSSIELCEREFQRGSLSDSSSFLDTQCDSVSSSGKQDGYVQFDKASKASASSSHHSQSSSQNSDPSRPL  
 QRRMQTHV

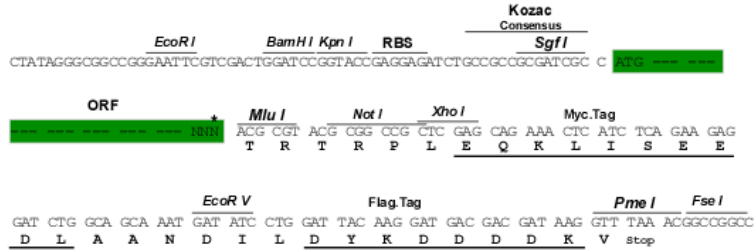
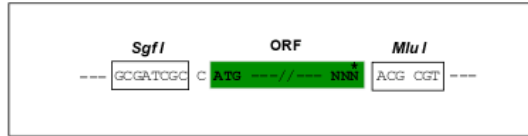
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-Mlul

## Cloning Scheme:

Cloning sites used for ORF Shutting:



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

ACCN: NM\_001190911

ORF Size: 2334 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_001190911.1](#), [NP\\_001177840.1](#)

**RefSeq Size:** 3737 bp

**RefSeq ORF:** 2337 bp

**Locus ID:** 67703

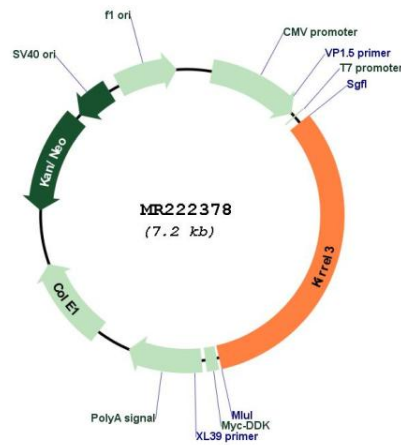
**UniProt ID:** [Q8BR86](#)

**Cytogenetics:** 9 A4

**MW:** 85.4 kDa

**Gene Summary:**

Synaptic adhesion molecule required for the formation of target-specific synapses (PubMed:23637329, PubMed:26575286). Required for formation of target-specific synapses at hippocampal mossy fiber synapses. Required for formation of mossy fiber filopodia, the synaptic structures connecting dentate granule and GABA neurons. Probably acts as a homophilic adhesion molecule that promotes trans-cellular interactions and stabilize mossy fiber filopodia contact and subsequent synapse formation (PubMed:26575286). Required for the coalescence of vomeronasal sensory neuron axons (PubMed:23637329). May be involved in the hematopoietic supportive capacity of stroma cells; the secreted extracellular domain is directly responsible for supporting hematopoietic stem cells (PubMed:12665856).  
 [UniProtKB/Swiss-Prot Function]

**Product images:**


Circular map for MR222378