

## Product datasheet for **MR215945**

### **Abr (NM\_198894) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Abr (NM_198894) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Abr
Synonyms:	6330400K15Rik; AU042359
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>MR215945 representing NM\_198894  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCAGCCGGGGCCGCCGCCGGCCGCGCCACTGCGCTACCAGTCCCTGGCAGCCCTGGTGAAGACTCTC  
 AGTGGCCTTTCTTGTTCCTTGTCTCAGACTTCAGCTACGGTGGCAGGACTACGACGCAGAGGGCATGA  
 GGAGCAGAAGGGGCCCCCGAGGGCTCGGAGACCATGCCGTACATCGACGAGTACCCACCATGTCGCCC  
 CAGCTCAGCGCCCGCAGCCAAGGTGGTGGGACAGCGTCTCGCCACCCACCTGAGGGATTGGCACCTG  
 GGGTGGAGGCAGGAAGGGTCTGGAGATGAGGAAGCTAGTCTCTCTGGGTTTCTGGCCAGTGAAGAGAT  
 CTACATTAACCAGCTGGAAGCTCTGTTACTGCCATGAAACCCCTGAAGGCCACAGCCACCACCTCCAG  
 CCTGTGCTCACCATCCAACAGATTGAGACCATCTTCTACAAGATCCAGGACATCTACGAGATCCACAAGG  
 AGTTCTACGACAACCTCTGCCCAAGGTGCAGCAGTGGGACAGCCAGGTACCATGGGCCATCTTTTCCA  
 GAAACTGGCCAGCCAGCTTGGCGTGTACAAGCATTGTGGATAACTATAAAGTCGCTCTGGAGACAGCC  
 GAGAAGTGCAGCCAGTCCAACAACAGTTCAGAAAGATCTCTGAGGAACCTCAAAGTGAAGGGCCCAAGG  
 ACTCTAAGGACAGCCATACATCAGTCCACATGGAAGCTCTGCTGTACAAGCCAATTGACCCGATCCCCG  
 GAGCACCTGGTCTTACGATCTGTTGAAGCACACCCCGTGGACCACCCGGACTACCCGCTGCTTCAG  
 GATGCTCTCCGCATCTCCAGAAATTTCTGTCTAGCATTAAAGGAGCATTGATCCTCGCCGGACTGCAG  
 TCACAACCCCAAGGGAGAGACTCGGCAGCTGGTGAAGGACGGCTTCTGGTGAAGTGTCTGAGAGCTC  
 CCGGAAGCTGCGGCATGTCTTCTTCCACAGATGTTCTGCTGTGTGCCAAGCTAAAGAAGACCTCAGCA  
 GGAAAGCATCAGCAGTATGACTGTAAGTGGTACATCCCTCTGGCTGACTTAGTGTCCCATCCCCTGAGG  
 AGTCCAGGGCCAGTCCCAGGTGCACCCCTTCCAGACCAGAGCTCGAGGACATGAAAACGAAGATCTC  
 TGCCCTCAAGAGTGAGATCCAGAAGGAGAAAGCCAACAAGGACAGAGCCGAGCCATTGAGCGCCTCAAA  
 AAGAAGATGTTTGAAGTGAAGTCTTACTGCTGCTCAATTCCCAACGATCCCTTTCCGGATACACAATC  
 GGAATGGAAGAGTTACCTGTTTCTGTCTTCTGACTATGAGAGGTCGGAGTGGAGAGAAGCGATTCA  
 GAAGCTACAGAAGAAGGATCTCCAGGCCTTGTCTGAGCTCTGTGGAGCTCCAGGTGCTCACGGGATCC  
 TGTTTCAAGCTTAGGACTGTGCACAACATTCTGTCCAGCAATAAAGATGATGATGAGTCTCCAGGAC  
 TGTACGGTCTCCTCATGTCATCGTCCACTCTGCCAAGGGCTTTAAACAGTCAGCCAATCTTTACTGTAC  
 TCTGGAGTGGATTCTTTGGCTATTTTGTGAGCAAGCCAAGACCAGGGTGTTCGGGACACGACAGAG  
 CCCAAGTGGGATGAGGAGTTTGAAGTGGAGTGGAGGTTTACAGTCCCTGAGGATCCTGTGTTATGAGA  
 AGTGTACGACAAGACCAAGGTCAACAAGACAACAATGAGATTGTGGACAAGATCATGGCAAGGGGCA  
 GATCCAGCTGGATCCACAGACAGTAGAAAGCAAGAAGTGGCATACGGACGTGATTGAAATGAATGGGATC  
 AAAGTGAATTTCCATGAAATTTACCAGCCGTGACATGAGCCTGAAGAGGACCCCATCCAAAAGCAGA  
 CAGGCGTCTTTGGAGTGAAGATCAGCGTGGTGACCAAGCGGGAGCGCTCAAGGTGCCCTACATCGTCCG  
 GCAATGCATAGAAGAGGTGGAGAAGAGGGGCATTGAGGAGGTTGGCATCTACAGGATATCAGGGGTGGCC  
 ACGGACATCCAGGCCCTGAAGGCTGTCTTTGATGCCAATAACAAGGACATCCTACTGATGCTGAGCGACA  
 TGGACATCAACGCCATCGCTGGGACCCTAAGCTATACTTTGGGAGCTGCCTGAGCCCCCTTACAGA  
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 CACCTACTCCGCTCCCTGCCTGACCCCAACCTCATCACCTTCTTTTCTGCTGGAACACTTGAAGGGG  
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 GAGACCATCAGAAGTGGAGAGCAAGCAGATCTCACATCAGCTGCAGACATCTGGTCCCATGATGTCATG  
 GCCCAGGTCCAGGTCTCCTCTACTACCTGCAGCATCCCCCATTTCTTTCGAGAACTGAAGCGGAACA  
 CACTGTACTTCTCCACAGACGTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR215945 representing NM\_198894  
 Red=Cloning site Green=Tags(s)

MAAGRRRRPLRYQSLAALVEDSQWPFLFLVSDFSYGAEDYDAEGHEEQKGPPEGSETMPYIDESPTMSP  
 QLSARSQGGGDSVSPTPEGLAPGVEAGKGLEMRKLVLSGFLASEEIIYINQLEALLLPMKPLKATATTSQ  
 PVLTIQQIETIFYKIQDIYEIHKEFYDNLCPKVQQWDSQVTMGLHFQKLASQLGVYKAFVDNYKVALETA  
 EKCSQSNQFQKISEELKVKGPKDSKDSHTSVTMEALLYKPIDRVTRSTLVLDLLKHPTVDHPDYPLLQ  
 DALRISQNFLLSSINEDI PRRTAVTTPKGETRQLVKDGFVEMSESSRKL RHFVLF TDVLLCAK LKKTSA  
 GKHQQYDCKWYIPLADLVFPSPEESEASPQVHPFPDHELEDMTKISALKSEIQKEKANKGQSRAIERLK  
 KKMFEFENFLLLSNPTIPFRIHNRNGKSYLFLSSDYERSEWREAIQKLQKDLQAFVLSSELQVLTGS  
 CFKLRVHNIPTVSNKDDDESPGLYGFLHVIHSAKGFQSANLYCTLEVDSFGYFVSKAKTRVFRDTE  
 PKWDEEFEIELEGSQSLRILCYEKCYDKTKVKNNDNEIVDKIMGKGQIQLDPQTVESKNWHTDVIEMNGI  
 KVEFSMKFTSRDMSLKRTPSKKQTVGVGVKISVVTKRERSKVPYIVRQCIEEVEKRGIEEVGIYRISGVA  
 TDIQALKAVFDANNKDILLMLSDMDINAIAGTLKLYFRELPELLTDRLYPAFMEGIALSDPAAKENCM  
 HLLRSLPDPNLITFLFLLHLKRVAEKEPINKMSLHNLATVFGPTLLRPSEVESKAHLTSAADIWSDVM  
 AQVQVLLYYLQHPPI SFAELKRNTLYFSTDV

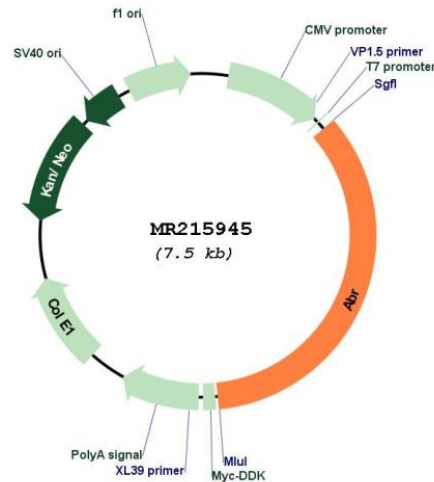
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**



**Plasmid Map:**


**ACCN:** NM\_198894

**ORF Size:** 2613 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 Size:** 5137 bp

**RefSeq ORF:** 2442 bp

**Locus ID:** 109934

**UniProt ID:** [Q5SSL4](#)

**Cytogenetics:** 11 45.92 cM

**MW:** 92.9 kDa

**Gene Summary:**

Protein with a unique structure having two opposing regulatory activities toward small GTP-binding proteins. The C-terminus is a GTPase-activating protein domain which stimulates GTP hydrolysis by RAC1, RAC2 and CDC42. Accelerates the intrinsic rate of GTP hydrolysis of RAC1 or CDC42, leading to down-regulation of the active GTP-bound form. The central Dbl homology (DH) domain functions as guanine nucleotide exchange factor (GEF) that modulates the GTPases CDC42, RHOA and RAC1. Promotes the conversion of CDC42, RHOA and RAC1 from the GDP-bound to the GTP-bound form (By similarity). Functions as an important negative regulator of neuronal RAC1 activity (PubMed:20962234). Regulates macrophage functions such as CSF-1 directed motility and phagocytosis through the modulation of RAC1 activity (PubMed:17116687).[UniProtKB/Swiss-Prot Function]