

Product datasheet for MC224137

Bcr (NM_001081412) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Bcr (NM_001081412) Mouse Untagged Clone
Tag: Tag Free
Symbol: Bcr
Synonyms: 5133400C09Rik; AI561783; AI853148; mKIAA3017
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC224137 representing NM_001081412
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGTGGACTCGGTGGGCTTCGCCGAGGCGTGGAGGGCGCAGTCCCGGACTCGGAGCCGCCGCGCATGG
 AGCTGCGCTCGTGGGTGACATCGAGCAGGAGCTGGAGCGCTGCAAGGCCTCCATTAGGCGCTTGGAGCA
 GGAGGTGAACCAGGAGCGCTTCCGATGATCTACCTGCAGACGCTGCTGGCCAAGGAGAAGAAGAGCTAC
 GATCGGCAGCGCTGGGGCTTCCGCCGTGCAGCGCAGCCCCCGACGGCGCCGCGAGCCCCGAGCGTCCG
 CCCCAGCGCCCGCCGCGCCCGCCGCGCCGCGAGACCCGCGCGCCCGTGGAGGAGTCCGAGGCGCGGCC
 GGACGGAGAGGGGTACCGAGTAAGGGGCGGTACGCTCCGCCGAGGCCAGCGGCTGCTGCATCGGCG
 GACCGGGACGACCGAGGGCCCCCACCAGCGTGGCGGCGCTCAGATCCAACCTTCGAGAAGATCCGCAAGG
 GACCTGCCAGCCCGCTCTGCCAGCCGAGAAGCCCTTCTACGTGAACGTGAGTTCCACCACGAGCG
 CGGCTGGTGAAGGTCAACGACAAAGAGGTGTCGACCGAATCAGTTCCTGGGAGCCAGGCCATGCAA
 ATGGAGCGCAAGAAGTCCAGCAGAGCGCCGGGAGGGCTGGGGGAAGCACCCAGACCCATTACCGTG
 GCGCTCCTCGAAAGCAGTTGCGGCTTGACGGTACTATGAGGATGCAGAGTTGAATCCCCGCTCCT
 GAAGGACAACCTAATAAATGCCAACGGCGCAACAGGCCCTTGCCCGCCCTGGAGTACCAACCCCTAC
 CAGAGCATCTATGTCGGAGGCATGATGGTGAAGGGGAGGGCAAGAGCCCTCTCCTGCGAAGCCAGAGCA
 CTTAGAGCAGGAGAAACGCCTAACCTGGCCTCGCAGGTCTACTCGCCTCGGAGTTTCGAGGACAGCGG
 AGGTGGCTACACGCCGACTGCAGCTCCAACGAGAACCCTCACCTCCAGCGAGGAGGACTTTTCTCTGGC
 CAGTCCAGCCGCTGTACCAAGCCCCACCACCTACCGCATGTTCCGGGACAAGAGCCGCTACCCCTCGC
 AGAATTCGAGCAGTCTTTGACAGCAGCAGCCCCCGACGCCACAGTGCAGAGCGGCACCGGCAGTG
 CCAGTTGTGGTGTCTGAGGCTACCATCGTGGGTGTCGCAAGACTGGGAGATCTGGCCAGTGTGGG
 GACAGCACCTTTCAAGGGGAAGCAGATTCTCGTTTGAACACCCTGGATATGGCTGTGCCGAGACC
 AGGCTGAGGAACAGCGCCGCGCACCAGGACGGGCTGCCCTACATCGATGATTCACCTTCTTCTCGCCACA
 CCTCAGCAGCAAAGGCAGAGGCAGCCTGGCCTCAGGCGCCCTGGATCCCACCAAAGTGAGTGAGCTGGAT
 CTGAAAAGGGCCTGGAGATGAGAAAGTGGTTTTGTCCGGAATCCTGGCCAGCGAGGAGACGTACTCTGA



GCCATCTGGAGGCCCTGCTGCTGCCCATGAAGCCTCTGAAAGCCGCTGCCACCACCTCTCAGCCTGTGCT
 GACCAGCCAGCAGATTGAGACATTTTCTTCAAAGTGCCTGAGCTCTACGAGATCCACAAGGAGTTCTAC
 GATGGGCTGTTCCCCGAGTGCAGCAGTGGAGCCACCAGCAGCGTGTAGGGGACCTTCCAGAAGCTGG
 CCAGCCAGCTGGGTGTGTACCGAGCCTTTGTGGATAACTACGGAGTGGCCATGAAAAGTGCAGAGAAGTG
 CTGTCAGGCCAACGCTCAGTTTGCAGAAATCTCTGAGAACCTGCGAGCCAGAAGCAACAAGGATGTCAAG
 GACTCAACTACCAAGAAGCTCTTTGGAACTCTGCTCTACAAACCTGTGGACCGGGTGACGAGGAGCACGC
 TAGTCTTCACGACTTGCTAAAACACACCCCGTCCAGCCATCCCGACCATTCCCTGCTGCAAGACGCCCT
 CCGAATCTCTCAGAACTTCTGTCCAGCATCAACGAGGAGATCACGCCCGCCGACAGTCCATGACGGTG
 AAAAAAGGAGAGACCCGCGAGCTGCTGAAGGACAGCTTTATGGTAGAGCTGGTGGAGGGGGCCCGCAAGC
 TGCGTCACATCTTCTGTCTACTGACCTGCTCCTCTGCACCAAGCTGAAGAAGCAAAGTGGAGGCAAAAAC
 CCAGCAATATGACTGTAATGGTACATTCGCTCACGGACCTCAGCTTCCAGATGGTGGATGAATTGGAG
 GCACTACCCAACATCCCTCTGGTGCCAGATGAGGAACTGGATGCCTTGAAGATCAAAATCTCCAAATCA
 AGAGCGACATCCAACGAGAGAAGAGAGCAAATAAGGGCAGCAAGGTCATGGAGAGGCTGAGGAAGAAGCT
 GTCAGAGCAGGAGTCACTGCTGTGTTAATGTCTCCAGCATGGCCTTCCGCGTTCACAGTCGCAACGGC
 AAGAGTTACACGTTCCCTATTTCTCTGACTATGAGCGAGCCGAGTGGAGAGAAAGCATCCGAGAGCAGC
 AGAAGAAATGTTTCAAAGTTTCTCTCTGACATCTGTGGAGCTACAAATGCTGACCAACTCATGTGTA
 ACTTCAGACGGTTCACCACATTCCTACTGACCATCAACAAAGAAGTACGAGTCTCCTGGACTCTACGGC
 TTCTGATGTCATCGTCCACTCAGCCACCGGCTTTAAGCAGAGCTCAAATCTCTACTGCACCCTGGAGG
 TGGATTCTTTGGATATTTGTGAATAAAGCAAAGACTCGAGTCTACAGGGACACAACTGAGCCAAACTG
 GAATGAGGAGTTTGGATAGAGCTAGAAGGCTCCAGACCCTGCGGATACTATGTTATGAAAAGTGTAC
 AACAAATGAAGATGACGAAGGAAGATGGTGAGAGCGCAGACAAGCTCATGGGAAAGGCCAGGTCCAGC
 TGGACCCCAAACCTACAGGACAGAGACTGGCAGCGGACTGTCATCGACATGAATGGAATTGAAGTGAA
 ACTCTCCGTCAAGTTCACGAGCAGGGAGTTCAGCCTGAAGAGAATGCCCTCCCGCAAACAGACAGGGGTC
 TTCGGTGTCAAGATTGCTGTAGTCACAAAGAGAGAGAGGTCACAAAGTACCTTACATTGTGCGCCAGTGTG
 TGAAGAGATCGAGCGCCGGGTATGGAGAGGTGGGCATCTACCGAGTGTCTGGAGTGGCCACAGACAT
 CCAGGCACTGAAGGCAGCCTTTGATGTCAATAACAAGGATGTGTCCGTGATGATGAGCGAGATGGACGTG
 AACGCCATTGCCGGCAGCTGAAGCTCTACTTCCGTGAGCTGCCCGAGCCCTTTCACGGATGAGTTCT
 ACCCTAATTTCGAGAAGGCATTGCTCTTTAGACCCCGTCGAAAGGAGAGCTGCATGCTGAACCTGCT
 GCTGTCCCTCCAGAAGCAACCTGCTCACCTTCTCTTCTCCTGGACCACCTGAAAAGGGTAGCTGAA
 AAGGAGACGGTGAACAAGATGTCCCTGCACAACCTCGCCACGGTCTTTGGCCCCACTGCTTCGGCCCT
 CAGAGAAGGAAAGCAAGCTCCCTGCTAACCCAGCCAGCCATCACCATGACTGACAGCTGGTCCCTGGA
 GGTGATGTCCAGGTCCAAGTGTGCTGTACTTCTGCAGCTGGAGGCCATCCCTGCCCTGACAGCAAG
 AGACAGAGCATCCTGTTTCCACTGAAGCTAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:

Sgfl-MluI

ACCN:

NM_001081412

Insert Size:

3813 bp

OTI Disclaimer:

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_001081412.2](#), [NP_001074881.1](#)

RefSeq Size: 6537 bp

RefSeq ORF: 3813 bp

Locus ID: 110279

UniProt ID: [Q6PAJ1](#)

Cytogenetics: 10 38.49 cM

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 (GAP) 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. The amino terminus contains an intrinsic kinase activity (By similarity). Functions as an important negative regulator of neuronal RAC1 activity (PubMed:20962234). Regulates macrophage functions such as CSF1-directed motility and phagocytosis through the modulation of RAC1 activity (PubMed:17116687). Plays a major role as a RHOA GEF in keratinocytes being involved in focal adhesion formation and keratinocyte differentiation (By similarity).[UniProtKB/Swiss-Prot Function]