

Product datasheet for SC125605

BCR (NM_004327) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: BCR (NM_004327) Human Untagged Clone
Tag: Tag Free
Symbol: BCR
Synonyms: ALL; BCR1; CML; D22S11; D22S662; PHL
Mammalian Cell Selection: None
Vector: pCMV6-XL6
E. coli Selection: Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene ORF sequence for NM_004327 edited
 ATGGTGGACCCGGTGGGCTTCGCGGAGGGCGTGAAGGCGCAGTCCCGGACTCAGAGCCC
 CCGCGCATGGAGCTGCGCTCAGTGGGCGACATCGAGCAGGAGCTGGAGCGCTGCAAGGCC
 TCCATTCGGCGCCTGGAGCAGGAGGTGAACCAGGAGCGCTTCCGCATGATCTACCTGCAG
 ACGTTGCTGGCCAAGGAAAAGAAGAGCTATGACCGGCAGCGATGGGGCTCCGGCCGCGCG
 GCGCAGGCCCCCGACGGCGCCTCCGAGCCCGAGCGTCCGCGTCGCGCCCGCAGCCAGCG
 CCCGCGACGGAGCCGACCCGCCCGCCGAGGAGCCCGAGGCCCGGCCGACGGCGAG
 GGTTCCTCCGGTAAGGCCAGGCCCGGGACCGCCCGCAGGCCCGGGGCGAGCCCGCTCGGGG
 GAACGGGACGACCGGGGACCCCGCCAGCGTGGCGGCGCTCAGGTCCAACCTCGAGCGG
 ATCCGCAAGGGCCATGGCCAGCCCGGGGCGGACCGCGAGAAGCCCTTCTACGTGAACGTC
 GAGTTTACCACGAGCGCGCCTGGTGAAGGTCAACGACAAAGAGGTGTCGGACCGCATC
 AGCTCCCTGGGCAGCCAGCCATGCAGATGGAGCGCAAAAAGTCCAGCAGCGCGCGGGC
 TCGAGCGTGGGGATGCATCCAGGCCCCCTTACCGGGGACGCTCCTCGGAGAGCAGCTGC
 GGCGTCGACGGCGACTACGAGGACGCCGAGTTGAACCCCGCTTCTCTGAAGGACAACCTG
 ATCGACGCCAATGGCGGTAGCAGGCCCCCTTGGCCGCCCTGGAGTACCAGCCCTACCAG
 AGCATCTACGTGGGGGCGATGATGGAAGGGGAGGGCAAGGGCCCGCTCCTGCGCAGCCAG
 AGCACCTCTGAGCAGGAGAAGCGCCTTACCTGGCCCCGAGGTCTACTCCCCCGGAGT
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 CGCATGTTCCGGGACAAAAGCCGCTCTCCCTCGCAGAAGTCCGCAACAGTCTTCGACAGC
 AGCAGTCCCCACGCCGAGTGCATTAAGCGGCACCGGCACTGCCCGTTGTCGTGTC
 GAGGCCACCATCGTGGCGTCCGCAAGACCGGGCAGATCTGGCCCAACGATGGCGAGGGC
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 GCCCTGGAGTCCACTAAAGCGAGTGAAGTGGACTTGGAAAAGGGCTTGGAGATGAGAAAA
 TGGTCTGTGCGGAATCCTGGTAGCGAGGAGACTTACCTGAGCCACCTGGAGGCACTG



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CTGCTGCCCATGAAGCCTTTGAAAGCCGCTGCCACCACCTCTCAGCCGGTGCTGACGAGT
 CAGCAGATCGAGACCATTCTTCAAAGTGCCTGAGCTCTACGAGATCCACAAGGAGTTC
 TATGATGGGCTCTTCCCCCGCTGCAGCAGTGGAGCCACCAGCAGCGGTGGGCGACCTC
 TTCCAGAAAGTGGCCAGCCAGCTGGGTGTGTACCGGGCTTCGTGGACAACACCGAGTT
 GCCATGGAAATGGCTGAGAAGTGTGTGACGGCCAATGCTCAGTTTGCAGAAATCTCCGAG
 AACCTGAGAGCCAGAAGCAACAAAGATGCCAAGGATCCAACGACCAAGAACTCTCTGGAA
 ACTCTGACTCTACAAGCCTGTGGACCGTGTGACGAGGAGCAGCTGGTCTCCATGACTTG
 CTGAAGCACACTCTGCCAGCCACCCTGACCACCCTTGTCTGACGAGCCCTCCGCATC
 TCACAGAACTTCTGTCCAGCATCAATGAGGAGATCACACCCCGACGGCAGTCCATGACG
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 GCCATGAATGGGATCGAAGTAAAGCTCTCGGTCAAGTTCAACAGCAGGGAGTTACAGTTG
 AAGAGGATGCCGTCCGAAAACAGACAGGGGTCTTCGAGTCAAGATTGCTGTGGTCACC
 AAGAGAGAGAGTCCAAGGTGCCCTACATCGTGCGCCAGTGCCTGGAGGAGATCGAGCGC
 CGAGGCATGGAGGAGTGGGCATCTACCGCGTGTCCGGTGTGGCCACGGACATCCAGGCA
 CTGAAGGCAGCCTTCGACGTCAATAACAAGGACGTGTCCGTGATGATGAGCGAGATGGAC
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 ACTGACGAGTTCTACCCAACTTCGACAGGGGCATCGCTTTTACAGCCCGGTTGCAAAAG
 GAGAGCTGCATGCTCAACCTGCTGCTGTCCCTGCCGGAGGCCAACCTGCTCACCTTCTT
 TTCTTCTGGACCACCTGAAAAGGGTGGCAGAGAAGGAGGCAGTCAATAAGATGTCCCTG
 CACAACCTCGCCACGGTCTTTGGCCCCACGCTGCTCCGGCCCTCCGAGAAGGAGAGCAAG
 CTCCCTGCCAACCCAGCCAGCCTATCACCATGACTGACAGCTGGTCTTGGAGGTCATG
 TCCCAGGTCCAGGTGCTGCTGTACTTCTGCAGCTGGAGGCCATCCCTGCCCCGGACAGC
 AAGAGACAGAGCATCCTGTTCTCCACCGAAGTCTAA

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_004327 unedited
 GCACGAGGGCCCGGCCCGGGCCGGGCTGGCGAGGCCCGCGCCGCGCTGAGACG
 GGCCCCGCGCGCAGCCCGCGCGCAGGTAAGGCCGGCCGCGCATGGTGGACCCGGTGG
 GCTTCGCGGAGGCGTGAAGGCGCAGTTCGCGACTCAGAGCCCCCGGCATGGAGCTGC
 GCTCAGTGGGCGACATCGAGCAGGAGCTGGAGCGCTGCAAGGCCCTCCATTGCGCGCTGG
 AGCAGGAGGTGAACCAGGAGCGCTTCCGCATGATCTACCTGCAGACGTTGCTGGCCAAGG
 AAAAGAAGAGCTATGACCGCAGCGATGGGGCTTCCGGCGCGCGCAGGCCCGCCGACGAGCG
 GCGCTCCGAGCCCCGAGCGTCCGCGTCCGCCCCGACGACGCGCCCGCGACGGAGCCG
 ACCCGCCGCCCGGAGGAGCCCGAGGCCCGGCCGACGCGGAGGTTCTCCGGTAAGG
 CCAGGCCCGGGACCGCCGACGGCCCGGGCAGCCGCTCGGGGAACGGGACGACCGGN
 GACCCCCCGCAGCTGGCGGCGCTCAGGTCCAATTCGAGCGGATCCGCAAGGGCCATG
 GCCAGCCCCGGGCGGACGCCGAGAAGCCCTTCTACGTGAACGTCGAGTTTACCACGAG

| | |
|-------------------------------------|--|
| 3' Read Nucleotide Sequence: | >OriGene 3' read for NM_004327 unedited TTGAGCGCAAGCGTTTTNTCCCAATCAACAACAGTGAGGGAATCCAGTCACGTTCCCTTC TCCCCAGAAGGGCGCATCTTGACAAGTGATCCAGTAGAAATCTTTTAGACTCTAAGTTAA GTTCAAAAAACCACTCCCTTACCCTGTCTCCAGGGCCAGGCCTGGACTCCGAGATGA ACTGGCTTGGGGCGCCCTCAGGTGGCCACATAAAAAACCAAGTCTGAGGCCAGCCTGGA GCTCCCAGACCTGGGCGGGATCTTCCAGGCCACCTGTCTTCCGGCTTTGGGTCGCTGTC TCTTGGCAGATGGCCCAACACTTGGGGGTGGCCCAAGGACACCTCAGGAAGGTTCCCGCT CTACGGATGGCCCGATTAGCCAGAGGTTTCCAGGCCATCTGTCCGCCTCCAGGAGATGGA CTGGGACCTTTAGACTTCGGTGGAGAACAGGATGCTCTGTCTTGTCTGTCCGGGCGAGG GATGGCTCCAGCTGCAGGAAGTACACAGCACCTGGACCTGGGACATGACCTCCAAGACC ACCTGTCACTCATGGTATAGGCTGGCTGGGTTGCAAGGAGCTTGGCTTCTTCTCGGAG GGCCGAACATCGGGGGCCAAAACCGTGGCGAGTTTGGCAGGCATCTTATTGACTGCCTC TTCTCTGCCACCCTTTAGGTGGGTCAAAGGAAAAGGAGGTGACCAGGTTGGCCTCCGG CAGGGACATCATCAAGGTTAAGCAGGCCGCTCTCTTTTCAACCGGTCTGAAAAACAT GCCCCCTTGCAAATTTGGGGAATAACTCGTCATTGAACAAGGCCTCCGGCCCTAACTGA AGTACACTTTTACCGGGCCGCAAGGGTTCAAGTCCATTAGGTATTATCACGAAACT TCCTGTTTTGTCTGCAAGTCTTCTTATGGGCCAGGAGTTCGGTCCAC |
| Restriction Sites: | NotI-NotI |
| ACCN: | NM_004327 |
| Insert Size: | 4500 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: | <ol style="list-style-type: none"> 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: | <u>NM_004327.2</u> , <u>NP_004318.2</u> |
| RefSeq Size: | 4739 bp |
| RefSeq ORF: | 3816 bp |
| Locus ID: | 613 |
| UniProt ID: | <u>P11274</u> |
| Cytogenetics: | 22q11.23 |
| Domains: | C2, RhoGAP, RhoGEF, PH |
| Protein Families: | Druggable Genome, Protein Kinase |

Protein Pathways:

Chronic myeloid leukemia, Pathways in cancer

Gene Summary:

A reciprocal translocation between chromosomes 22 and 9 produces the Philadelphia chromosome, which is often found in patients with chronic myelogenous leukemia. The chromosome 22 breakpoint for this translocation is located within the BCR gene. The translocation produces a fusion protein which is encoded by sequence from both BCR and ABL, the gene at the chromosome 9 breakpoint. Although the BCR-ABL fusion protein has been extensively studied, the function of the normal BCR gene product is not clear. The unregulated tyrosine kinase activity of BCR-ABL1 contributes to the immortality of leukaemic cells. The BCR protein has serine/threonine kinase activity and is a GTPase-activating protein for p21rac and other kinases. Two transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Jan 2020]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).