

## Product datasheet for **RN200632**

### **Bcar3 (NM\_001107722) Rat Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Bcar3 (NM_001107722) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Bcar3
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >RN200632 representing NM\_001107722  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCTGCGGGAAAATTTGCAAGCCTTCCAGACACATGCCCGTGAATCACCAGTCCCTTTGGCCTCGT  
 CCATGGACCTCCTGAGCAGCAAGTCCCCTCTCGCTGAGCATCGCACAGAGGCCTATCCAGACGTGTCCAT  
 ACACGGCACTCTTCCACGGAAGAAAAAGGCCCTCTCCATACGGTCTGTGACAGTGCCAGTCACATG  
 GGCACCCTCCCTCACTCCAAGTCCCACGACAGAGCTCACCTCTGACCCAGGACCTCATCTGGAAAAAC  
 CACTGCCAGACTGGAAAGGGGACAGCTTCGCCTTCAGGGATCCCTATCTTCTGGACCCAACCTGGAGTA  
 CGTGAAGTTCTCCAAGGAGAGGCACATCATGGACAGGACCCTGAGAGGCTGAAAAAGGAACTGGAGGAG  
 GAGCTACTGCTGAGCAGCGAGGACCTACGCAGCCATGCCTGGTACCACGGCCGGATCCCCAGACAGGTGT  
 CTGAAAACCTTGTGCAGCGGGATGGGGACTTCTGGTTCTGTGACTCCCTGTCTAGCCCTGAAAACCTTGT  
 CCTGACCTGTGAGTGAAGAACCTTGTGCTCAGCACTTTAAGATCAACCGGACTGTTCTGCGGCTCAGCGAG  
 GCCTACAGCCGTGTGAGTACCAATTGAGATGGAGAGCTTTGACTCCATCCCCGGGCTGGTACGCTGCT  
 ACGTGGGAAACCGGAGGCCCATCTCCAGCAGAGCGGCGCCATCATCTTCCAGCCTATCAATAGGACAGT  
 GCCCTTTGGTGTCTGGAGGAGCGTTATGGCACCTCACCAGGCCGAGGCCGGGAGGGCAGCTTTGCTGAG  
 GGAAGACCAGATGTGGTGAAGAGACTGAGCCTCACCACAGGTGGCATCCAGGCTCGGGACCACAGCTTGC  
 CCAGAGGAAACCTCCTCAGGAATAAGGACAAGAGTGGCAGCCAGCCCGCTGCCTGGATCACGTGCAGGA  
 CCGGAAGCCCGCAACTCAAGGCTCACCAGTCTGAGAGTCACTGCCATCGGCTGCAAGCTGCCACCC  
 CAGTCTCCGAGTGTGGACACAAGCCCTTGCCTCAACTCTCCCGTTCAGGACTGGCAGCGAGCCCACTC  
 TGAGTCCGGCACTGGTACGAAGTTCTCTTCGGACGCTAGGGCAGGGGAGGCACCTCGGGATCAGACAG  
 TCAACTGTGCCCCAAGCCACCCCAAGCCCTGCAAGGTGCCCTTCTCAAGTTCTCCCTCTCCATCT  
 CCTGGCTAAACTCAGAGGCCAACTACTGTGAACCTGAACCCTGCTTTTGGGTGGGCTGTGACAGGGGAG  
 CCAAGTCTCTCACAGGCTCTCGACAGCCACGAGATGCTGCTGACAGCCAAACAGAATGGGGCATCGGG  
 TCCCCGAACTCTGGCATCAACTACTCGATACTTATGGGGATGACCAAGGGAGACATTGGGATCCCCTG  
 GCCGTGCAGACGGATGAGGGTCAAGGAGCAGACCAAGTTTGTACCACCTGTATGGAGACAGTGTGAT  
 CATTACAGCCCAATGACTTTGAGTGAAGCTTCTTCTCCAGAGAACAAGCCCTGGAAACGCCATGCT  
 AAAGCATGCCAAGGAAGTTCACCAACCATGACGCGAGGGTATTGCACAGCACATGCTGAGCGTGGAC  
 TGCAAGTTGCTAGGATACTGGAAGTCTCTGAAGACATGAAGAGGAGCATGGGCGTGAAGTGGGACTGG  
 AACTCATTACCTTGCCTACGGACGCCAGCTGCGCCTGGACATTATTGAAAGACACAACCCATGGCCAT  
 TGGCATTGCTGTGGACATTCTGGGCTGCACGGGCACATTGGAGAACCAGGAGCAACCCCTAATAAGATC  
 ATCCAGGTGGCAATGGAAGTGAAGGACACCATGGGAGACCTCTATTCTTCTCAGCCATCATGAAAGCCC  
 TCGAGATGCCTCAGATCACAAGTTAGAAAAACATGGACGGCTCTGAGGCACCACTACACGCAACAGC  
 CATCCTTACGAAAAGCAGTTGAAGCCCTTAGCAAAATCCTGCATGAAGGCAGAGAGTCGACATATGTC  
 CCAGCAAGCAGTGTGTCGGTCCCACTGCTGATGCCTCTTGTGACCTTAATGGAACGGCAGGCTGTCACTT  
 TTGAAGGAACCGACATGTGGGAAAAAATGACGAGAGCTGTGAAATCATGCTGAGTCACTTGGCCACAGC  
 CAGGTTTCATGGCCGAGGCTTCGGAGAGCTACAGGATGAATGCTGAGAGGGTCTGGCAGATTTCCAACCG  
 GATGAAGAAATGACTGAAATCCTAAAGACTGAGTTCCAGATGCGATTGTTGTGGGGCAGCAAGGGTGTG  
 AAGTCAACCAGAACGAGAGATATGACAAGTTCAACCAGATCCTAACTGCCCTCTACGGAACCTGGAACC  
 TCCTTCTGGAAGCAGGCTGAGCT**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_001107722  
**Insert Size:** 2478 bp

<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001107722.1</a> , <a href="#">NP_001101192.1</a>
<b>RefSeq Size:</b>	3337 bp
<b>RefSeq ORF:</b>	2478 bp
<b>Locus ID:</b>	310838
<b>UniProt ID:</b>	<a href="#">D3ZAZ5</a>
<b>Cytogenetics:</b>	2q42
<b>Gene Summary:</b>	Acts as an adapter protein downstream of several growth factor receptors to promote cell proliferation, migration, and redistribution of actin fibers (By similarity). Specifically involved in INS/insulin signaling pathway by mediating MAPK1/ERK2-MAPK3/ERK1 activation and DNA synthesis (PubMed:24216110). Promotes insulin-mediated membrane ruffling (PubMed:24216110). In response to vasoconstrictor peptide EDN1, involved in the activation of RAP1 downstream of PTK2B via interaction with phosphorylated BCAR1 (By similarity). Inhibits cell migration and invasion via regulation of TGFB-mediated matrix digestion, actin filament rearrangement, and inhibition of invadopodia activity (By similarity). May inhibit TGFB/SMAD signaling, via facilitating BCAR1 and SMAD2 and/or SMAD3 interaction (By similarity). Regulates EGF-induced DNA synthesis (By similarity). Required for the maintenance of ocular lens morphology and structural integrity, potentially via regulation of focal adhesion complex signaling (By similarity). Acts upstream of PTPRA to regulate the localization of BCAR1 and PTPRA to focal adhesions, via regulation of SRC-mediated phosphorylation of PTPRA (By similarity). Positively regulates integrin-induced tyrosine phosphorylation of BCAR1 (By similarity). Acts as a guanine nucleotide exchange factor (GEF) for small GTPases RALA, RAP1A and RRAS (By similarity). However, in a contrasting study, lacks GEF activity towards RAP1 (By similarity).[UniProtKB/Swiss-Prot Function]