

Product datasheet for **MR209303**

Sh3bp1 (BC004598) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sh3bp1 (BC004598) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Sh3bp1
Synonyms:	3BP-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR209303 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCAGAGAGCTTCAAGGAAGTGGATCCTGATTCCAGCATGGGGAAGGCCTTGAGATGACCTGCGCCA
 TCCAGAACCAGCTGGCCGAATCCTAGCCGAGTTTGAGATGACCCTGGAGAGGGATGTCCTGCAGCCGCT
 CAGCAGGCTGAGCGAGGAGGAGCTGCCTGCCATCCTGAAGCACAAGAAAAGCCTTCAGAAGCTGGTGTCT
 GACTGGAACACCCTCAAAGCAGGCTCAGCCAGGCAGCCAAGAACTCAGGAAGCAACCAAGGCCTGGGTG
 GTGCCCTCAGGCAGTACACCCACACCACCCTGCCAACAAAGGTAGAGATGCTGAAGGAGGAAGAGGAGGA
 GCTCAAGAAGAAGGTGGAACAGTGAAGGACGAGTACCTGGCCGATCTCTACCCTTCTCCACCAAGGAA
 GATTCTTATGCCAACTACTTTATTCATCTCTTGGAGATTAGGCTGACTACCACCGCAAGTCACTGACCT
 CACTCGACACGGCCCTAGCTGAGCTGAGGGACAACCACAACCAAGCAGACCCTCCCCCTTGACGACGGC
 TGCCCCCTTCTCCAGGATATATGGGGTATCTTTGAGAACCACCTACAAGACCTAGGCCGTGACATTGCC
 CTGCCATCGAGGCTGCGTCTGTTGCTGTGTGAGAGGCATGCAGGAGGAGGGCCTCTCCGCTGTG
 CTGCTGGGGCCTCTGTGCTGAAGCGCCTTAAGCAGACCATGGCCTCAGATCCCCACAGCCTAGAGGAATT
 CTGCTCAGACCCCATGCTGTAGCAGGTGCCCTCAAGTCTATCTCCGGGAGCTGCCGGAGCCCCTGATG
 ACCTCTGACCTCTACGATGACTGGATGAGAGCAGCCAGCCTGAAGGAGCCAGGAGCCCGCCTGGAAGCCC
 TCCATGATGTTTGCAGCCGTCTACCCCAAGAGAAGTCAACAACCTCAGTACCTGATGAAGTTCCTGGC
 TCTGCTGGCAGAGGAGCAGGATGTAACAAGATGACACCCAGCAACATCGCCATTGCTCTAGGACCAAC
 CTGCTGTGGCCTCCCGAGAAAGAAGGGGACCAGGCCAACTGGACGCTGCCTCTGTCTCCATTCAGG
 TGGTGGGTGTTGTGAGGCGCTGATACAGAACGCAGACACCCTCTCCCTGGAGATATCAACTTCAATGT
 ATCAGGCATCTTCCAGGCTGGCCCCCAGGAGAAGGTGAGTACCAACAGGTCTCAGAGGAGTTGCCA
 CCTGTTACTGTGCTGCCCCAGCCACGACCCAGCTCCACCCTGGCTCCAGCCTCAATGGCTGTGAGAG
 AAAGGACAGAGGCTGACTTGCCCAAACCACTTCTCCAAGGTCAGCAGGAACCCACCGAAACAGCTGC
 TTCGGCGGAGGACATGACCCGTAAGACCAAGCGCCAGCCCGCCGCTACCATGCCACCTCCCCAG
 CCCTCCAGCACCCGCTCATCCCCCAGCTCCATCCCTGCCCCCTGGCTCTGTGAGCCCTGGTACTCCCC
 AAGCTCTGCTCGCCGTCTGGTGGGCACCAGCCTCCGGGCCCTACCATGCCTCCCCGCTACCCCTGT
 TCCTCCACAGCCTGCCCGGCTCAGAGCCGGCCTTACCAGCCTCCCTGTCTCAAATATGCCTGCT
 CAGGTGGACCAGGAGTAGCTACAGAGGACAGAGAAGGCCCTGAGGCTGTGGTGGGCATCCCCCTCCAC
 CAGCTCTGCCACCCAGCCCGCCAGGGCCTCATTTAGAGACAGAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR209303 protein sequence
 Red=Cloning site Green=Tags(s)

MAESFKELDPDSSMGKALEMTCAIQNQLARILAEFEMTLERDVLQPLSRLSEEELPAILKHKSLQKLVS
 DWNTLKSRLSQAANKNSGNSQGLGGASGSHHTTTANKVEMLKEEEEELKKKVEQCKDEYLADLYHFSTKE
 DSYANYFIHLLLEIQADYHRKSLTSLDTALAEIRDHNHQADHSPLTTAAPFSRVYGVSLRTHLQDLGRDIA
 LPIEACVLLLLSEGMEGLFRLAAGASVLKRLKQTMASDPHSLEEFCSDPHAVAGALKSYLRELPEPLM
 TSDLYDDWMRAASLKEPGARLEALHDVCSRLPQENFNRLRYLMKFLALLAEEQDVKMTPSNIAIVLGN
 LLWPPEKEGDQQLDAASVSSIQVVGVEALIQNADTLFPGDINFNVSIGIFPLAPQEKVSSQVSEELP
 PVTVPAPATTPAPTLAPASMAVRERTEADLPKPTSPKVS RNPTETAASAEDMTRKTKRPAPARPTMPPQ
 PSSTRSSPPAPSLPPGSVSPGTPQALPRRLVGTSLRAPTMPPPLPPVPPQPARRQSRRLPASPVISNMPA
 QVDQGVATEDREGPEAVGGHPPPPALPPQPRRGLISETE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: BC004598

ORF Size: 1800 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: [BC004598](#), [AAH04598](#)

RefSeq Size: 2224 bp

RefSeq ORF: 1802 bp

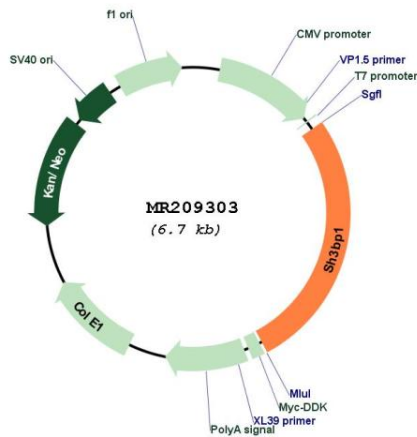
Locus ID: 20401

Cytogenetics: 15 E1

MW: 65.3 kDa

Gene Summary: GTPase activating protein (GAP) which specifically converts GTP-bound Rho-type GTPases including RAC1 and CDC42 in their inactive GDP-bound form (PubMed:7621827). By specifically inactivating RAC1 at the leading edge of migrating cells, it regulates the spatiotemporal organization of cell protrusions which is important for proper cell migration. Also negatively regulates CDC42 in the process of actin remodeling and the formation of epithelial cell junctions. Through its GAP activity toward RAC1 and/or CDC42 plays a specific role in phagocytosis of large particles. Specifically recruited by a PI3 kinase/PI3K-dependent mechanism to sites of large particles engagement, inactivates RAC1 and/or CDC42 allowing the reorganization of the underlying actin cytoskeleton required for engulfment. It also plays a role in angiogenesis and the process of repulsive guidance as part of a semaphorin-plexin signaling pathway. Following the binding of PLXND1 to extracellular SEMA3E it dissociates from PLXND1 and inactivates RAC1, inducing the intracellular reorganization of the actin cytoskeleton and the collapse of cells (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR209303