

## Product datasheet for RC220929

### Spectrin beta chain, brain 3 (SPTBN4) (NM\_020971) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Spectrin beta chain, brain 3 (SPTBN4) (NM_020971) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SPTBN4
Synonyms:	CMND; NEDHND; QV; SPNB4; SPTBN3
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC220929 representing NM_020971 Red=Cloning site Blue=ORF Green=Tags(s)

CTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGCAGGTACCAGGGGAAGTGGACAACATGGAGGGCCTGCCTGCTCCTAACAACAACCCTGCTGCC  
GCTGGGAGAGTCCGGATCGGGCTGGGAGCGGGAGCAGCCGGCTGCGTCCACCGCAGCGGCTCGCTCTT  
TGAGTGTCCCGGATCAAGGCCCTGGCAGATGAGCGGGAAGCCGTGCAGAAGAAAACCTTACCAAGTGG  
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TGCGCCAGTGGGCCCTGCTAACTGGGCTTGTGGGTGCCCGGGACGACTTGAGCAGAACCTTGCCCT  
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CTCGAGCAGAACTCATCTCTGAAGAGGATCTGGCAGCAAATGATATCCTGGATTACAAGGATGACGACG  
 ATAAGGTTTAA

Protein Sequence: >RC220929 representing NM\_020971  
 Red=Cloning site Green=Tags(s)

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 GSHDIVDGNHRLTLGLVWTIILRFQIQVIKIETEDNRETRSAKDALLWCQMKTAGYPEVNIQNFTTSWR  
 DGLAFNALIHRHRPDLVDFSKLTKSNANYNLQRAFRTAEQHLGLARLLDPEDVNMEAPDEKSIITYVVSF  
 YHYFSKMKALAVEGKRIKVLVDQVLEVGKIIERYEELAAELLAWIHRTVGLISNQKFANSLSGVQQQLQA  
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 GASGAGPLVVALQVRVVEAEQLFAEVTEVAALRRQWLRDALAVYRMFGEVHACELWIGEKEQWLLSMRVP  
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 RFPQAARLHQGAEELEGAEWGALASAAQACGEAVAAAGRLQRFLHDLDAFLDWL VRAQEAAGGSEGPLPN  
 SLEEADALLARHAALKKEEVDQREEDYARIVAASEALLAADGAELGPGALDEWLPHELELQHWKLLGLWEA  
 RREALVQAHYQLFLRDLRQALVVLRNQEMALSGAELPGTVEVVEALKQHRDFLTTMELSQQKMQVAVQ  
 AAEGLLRQGNIIYGEQAQEA VTRLLEKNQENQLRAQQWMQKLDQLELQHF LRDCHELDGIHEKMLMARD  
 GTREDNHKLHKRWLRHQAFMAELAQNKWELEKIEREGQQLMQEPELAASVRKKLGEIRQCWAELESTTQ  
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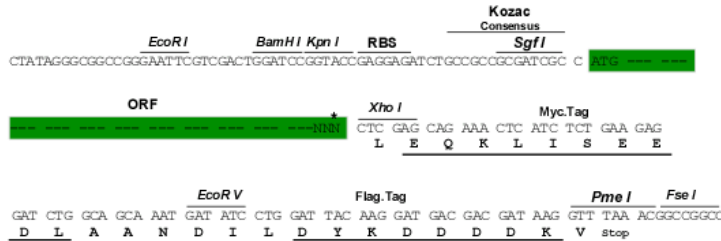
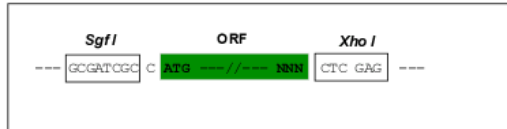
LEQKLISEEDLAANDILDYKDDDDK V

Restriction Sites:

SgfI-XhoI

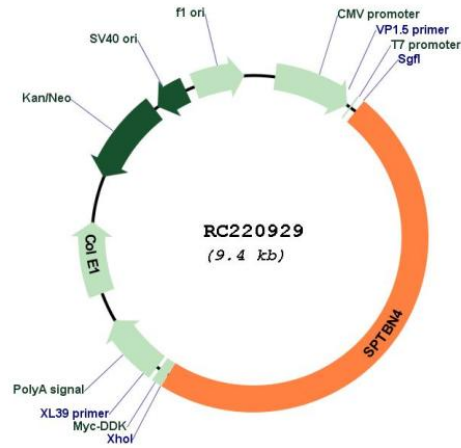
Cloning Scheme:

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM\_020971

ORF Size: 4500 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in *E. coli* are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

<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 Size:</b>	8671 bp
<b>RefSeq ORF:</b>	7695 bp
<b>Locus ID:</b>	57731
<b>UniProt ID:</b>	<a href="#">Q9H254</a>
<b>Cytogenetics:</b>	19q13.2
<b>MW:</b>	288.8 kDa
<b>Gene Summary:</b>	Spectrin is an actin crosslinking and molecular scaffold protein that links the plasma membrane to the actin cytoskeleton, and functions in the determination of cell shape, arrangement of transmembrane proteins, and organization of organelles. It is composed of two antiparallel dimers of alpha- and beta- subunits. This gene is one member of a family of beta-spectrin genes. The encoded protein localizes to the nuclear matrix, PML nuclear bodies, and cytoplasmic vesicles. A highly similar gene in the mouse is required for localization of specific membrane proteins in polarized regions of neurons. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]