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Product datasheet for SC103835

RICH2 (ARHGAP44) (AK023797) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RICH2 (ARHGAP44) (AK023797) Human Untagged Clone
Tag:	Tag Free
Symbol:	RICH2
Synonyms:	NPC-A-10; RICH2
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for AK023797, the custom clone sequence may differ by one or more nucleotides

ACAACTTTGTGTTTTGTTGTTGTGTTGTGTTTTCTCTTTCAGTTTCAAAGAAGCTGGCACCGATTCCACC
CAAGGTCCCCTTTGGCCAGCCGGGGGCTATGGCAGACCAGTCCGCTGGCCAGCCGTCCCCAGTCAGCCTG
TCCCCCACCCAGCCCAGCACCCCGTCACCCTATGGACTGAGCTACCCTCAGGGGTACTCCTTGGCCTCGG
GCCAGCTCTCCCCAGCTGCAGCTCCTCCCCTGGCCTCTCCTTCTGTCTTTACAAGCACTTTGAGCAAATC
GCGGCCCACTCCTAAGCCGCGACAGAGACCTACTCTGCCGCCTCCTCAGCCTCCCACAGTAAACCTCTCG
GCCTCTAGTCCACAGTCCACGGAGGCCCCCATGCTAGATGGCATGTCCCCTGGGGAAAGCATGTCTACAG
GTAACCAAGCCACAGGCTCCCTCACTTTTTTTTATGAACTTTAGTGAAATGTGCCTAGGGGATGGATTGC
TAGAGTTACTGCCAGTGAACACATTCCTGCGTGCTTTGGGATGACTGGGCTGGCACCAGGGGTAGCTCAT
AAGATCTCCTTAGAAGCCCACCAATGGAAAGCAACCCTGGAATCCATGTGTCCCACACAGGGGCTTCTTA
TGGGATCTCTCTCGGTCTAAGCCCACCAGCCTGGGGTTCTGTTTTTGCTCTTATTATCGGGGGTTGAAGA
CACTGAGTCATTTGGAGTGGGGCCTCAGGAGAGGCTGGAAGCTGGTTATGATCACAAAACAGCATCAAAA
CTCAGGTATTTCCTGGATAGAGCCCAAGCAACTGACAGGTATAAATGCTTATCTGGAGAACAGGGGCTAA
GAACCCAAGATGTTTTTTTACTATTACTAAAATAAGCCTTGCTAGAAAAATATACTTCCAGATAGATATT
TAGAGAGGGGTGAATTTCAGAAAACATGCATGTCTCCATTCTCCTCCACCAGACTCCCCTCCCTGGCCAA
TTCCCTGAGGAGCTAATTGGACAAACCCACAACGACTTAATTTAGTTTGGGCTTAAATTTAGAAACAAAG
ACGGAGCTCTCTTCCCCCAGAAAAATCTGTAAGCACAAAATCGCAAACACACACCACGTTTAGCCAAAAC
CATTCATTGGCTGGAAGGAACGGGATGTTTTTGGAACATCTCCCCAGACACTTCAACCACATAAGATTAT
AAAGTCAGGGGCCTATTTGTGGTGGCTGCTAAAGTCATTTGAGCATTTTCCTTGTTCAGGGAGACAGGCA
CAGGGTTGAGCCGTGTCTTGGGCTAGAGCCAACCCACTTAGTAAAGTGCAGTAGCATGGCGGTGAGCTGG
AGCATATGTGTACCTAGTGTTGTCCCAAGTAGCAGAAGGTGAGGCAGCTTGGGTTGGAACACACACACCA
CATACACACACACCCACTCACCCATTTCAAAGAACAGTGCTGTCCTAGGATGCACTGGGACTTTTGTGAT
AATGCACTTTTCCCTCCACGTCCTTCTCCAAAAGAGTGATTTATTTCTTCCGTGATTAGACGGAAGCAGT
GACCCTGTGGGGTTCAGCTCCGTGCTGCCTTTGAAAAGGCTAGTCCAATTTGCAAGTGTTTGTACTGGGT

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CAGATTTAAATATTACGGGGAAGAGCCATCTGGTGATTCGGCTTCTTTATTTTTGGATGTGATTAATGTT
GAAGGTACAAGCTGCTGTCATCTACCCCGAGGCTTATTAAAAATTAGGCAAATTTCTCCCTGGAAAATGC
AGTAGCACCACGCCCATCTTGGTGGGTCTTGGTGCTGAGGTGTCTCCTGAAGGAGCCCATGATAGGAGGG
CACAGGCTTGCTGCCCTCGGGGAAGGTCACAGCTGCGGAGGAGCTGAAGGTCACCCGAGCCAGGTCTCCA
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CCTCGTCTCTGCATGTGGCTCAGACCATTTGTATGGCAGCTTCACTCTCCAGCCTTCCCCGGCCTCAGCA
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CATGGTCCTGCAGAGACTACCGAGGCGCACCAGGATATCTGGTGCTCACAGACAGGTCTCCTGGCGGGTG
CTTCCCGAGTGTCCTGGAGACAAGCAGCCACTGTGTCCCTTTTCCCAGGAATGCTGATGAGGGCTTCTGC
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AGGCCACCTGCTTCAGAGGAACAAGTGGCACTGGCTGTTCCTCCAGCCCCACGCCCCAAATCTCTGCTTC
TCCATCAGGCAGCAAAACAAAGACTGGAAGGACGTGAGGGCTGCCTGGGGGTTGGGGCAAGGGAGGACCT
TTGTTCAAGAGCTTCCATGTTTGTATGATGTCTTTCAGGACAGTGTCCAAATGTATGTCTGTACACTTAG
TATGGTATTCCCCAGTCTGAACATGTGTTCCCTTCCTCTGCCTCCTGGAGTGCTGCTCCCAGCCTTGCAA
AGCTAAGTGACAGCCAGAAACTAAGCAGGCAGGCCGGGCGTGGTTGCTCACGCCTGTAATCCCAAAACTT
TGGGAGGCTGAAGTGGGTGAATCACCTGAGGTCACGAGTTCGAGACCAGCCTGGCCAACATGGTGAAACC
CAATCTCTACTAAAAACACC

5' Read Nucleotide Sequence:

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>OriGene 5' read for AK023797 unedited
GGTCAACATTTGTATACGACTCCTATAGGGCGGCCGCGAATTCGCACGAGGCAGGCTCCA
GCCAGGGCACAGCCTGTGCAGGGACTCAACCAGGGGCTCAACCTGGAGCTCAGCCGGGCG
CCAGCCCCAGCCCCAGCCAGCCGCCTGCAGACCAGAGTCCTCACACCCTCCGGAAAGTTT
CAAAGAAGCTGGCACCGATTCCACCCAAGGTCCCCTTTGGCCAGCCGGGGGCTATGGCAG
ACCAGTCCGCTGGCCAGCCGTCCCCAGTCAGCCTGTCCCCCACCCCGCCCAGCACCCCGT
CACCCTATGGACTGAGCTACCCTCAGGGGTACTCCTTGGCCTCGGGCCAGCTCTCCCCAG
CTGCAGCTCCTCCCCTGGCCTCTCCTTCTGTCTTTACAAGCACTTTGAGCAAATCGCGGC
CCACTCCTAAGCCGCGACAGAGACCTACTCTGCCGCCTCCTCAGCCTCCCACAGTAAACC
TCTCGGCCTCTAGTCCACAGTCCACGGAGGCCCCCATGCTAGATGGCATGTCCCCTGGGG
AAAGCATGTCTACAGGTAACCAAGCCACAGGCTCCCTCACTTTTTTTTATGAACTTTAGT
GAAATGTGCCTAGGGGAGGGATTGCTAGTGTTACTGCCAGTGAACACATTCCTGCGTGCT
TTGGGATGACTGGGCTGGCACCAGGGGTAGCTCATAAGATCTCCTTAGAAGCCCACCAAT
GGAAAGCAACCCTGGAATCCATGTGTCCCACACAGGGGCTTCTTATGGGATCTCTCTCGG
TCTAANGCCACCAGCCTGGGGGTNCTGTTTTTGCTCTTATATCGGGGGNTNGAGACACTG
AGTCATTTGGAGTGGGGCCTCNAGAGAGGCTGAAGCTGGNTATGATCACAAACAGCATCA
AACTCAGGTTTTNCTGGNAAGAGCCCAGCACTGACAGTT
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Restriction Sites: NotI-NotI

ACCN: AK023797

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: AK023797.1

RefSeq Size: 4430 bp

RefSeq ORF: 4430 bp

Locus ID: 9912

Cytogenetics: 17p12

Gene Summary: GTPase-activating protein (GAP) that stimulates the GTPase activity of Rho-type GTPases. Thereby, controls Rho-type GTPases cycling between their active GTP-bound and inactive GDP-bound states. Acts as a GAP at least for CDC42 and RAC1 (PubMed:11431473). In neurons, is involved in dendritic spine formation and synaptic plasticity in a specific RAC1-GAP activity (By similarity). Limits the initiation of exploratory dendritic filopodia. Recruited to actin-patches that seed filopodia, binds specifically to plasma membrane sections that are deformed inward by acto-myosin mediated contractile forces. Acts through GAP activity on RAC1 to reduce actin polymerization necessary for filopodia formation (By similarity). In association with SHANK3, promotes GRIA1 exocytosis from recycling endosomes and spine morphological changes associated to long-term potentiation (By similarity).[UniProtKB/Swiss-Prot Function]