

## Product datasheet for **TR315704**

### **RICH2 (ARHGAP44) Human shRNA Plasmid Kit (Locus ID 9912)**

#### **Product data:**

<b>Product Type:</b>	shRNA Plasmids
<b>Product Name:</b>	RICH2 (ARHGAP44) Human shRNA Plasmid Kit (Locus ID 9912)
<b>Locus ID:</b>	9912
<b>Synonyms:</b>	NPC-A-10; RICH2
<b>Vector:</b>	pRS (TR20003)
<b>E. coli Selection:</b>	Ampicillin
<b>Mammalian Cell Selection:</b>	Puromycin
<b>Format:</b>	Retroviral plasmids
<b>Components:</b>	ARHGAP44 - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 9912). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
<b>RefSeq:</b>	<a href="#">NM_001321164</a> , <a href="#">NM_001321166</a> , <a href="#">NM_001321167</a> , <a href="#">NM_001321168</a> , <a href="#">NM_014859</a> , <a href="#">NR_135569</a> , <a href="#">NM_014859.1</a> , <a href="#">NM_014859.2</a> , <a href="#">NM_014859.3</a> , <a href="#">NM_014859.5</a> , <a href="#">BC022452</a> , <a href="#">BC070074</a> , <a href="#">BC094754</a> , <a href="#">BC117412</a> , <a href="#">BC117416</a> , <a href="#">BC143852</a> , <a href="#">BC143853</a> , <a href="#">BC143855</a> , <a href="#">BC143856</a> , <a href="#">BM993036</a>
<b>UniProt ID:</b>	<a href="#">Q17R89</a>
<b>Summary:</b>	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]
<b>shRNA Design:</b>	These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact <a href="mailto:techsupport@origene.com">techsupport@origene.com</a> . If you need a special design or shRNA sequence, please utilize our <a href="#">custom shRNA service</a> .



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**Performance  
Guaranteed:**

OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.

For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at [techsupport@origene.com](mailto:techsupport@origene.com). Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).