

## Product datasheet for **AR50840PU-N**

### ARC / ARG3.1 (1-396, His-tag) Human Protein

#### Product data:

<b>Product Type:</b>	Recombinant Proteins
<b>Description:</b>	ARC / ARG3.1 (1-396, His-tag) human recombinant protein, 50 µg
<b>Species:</b>	Human
<b>Expression Host:</b>	E. coli
<b>Expression cDNA Clone or AA Sequence:</b>	MGSSHHHHHH SSGLVPRGSH MELDHRTSGG LHAYPGPRGG QVAKPNVILQ IGKCRAEMLE HVRRTHRHLL AEVSKQVERE LKGLHRSVGK LESNLDGYVP TSDSQRWKKS IKACLCRCQE TIANLERWVK REMHVWREVF YRLERWADRL ESTGGKYPVG SESARHTVSV GVGGPESYCH EADGYDYTVS PYAITPPAA GELPGQEPAE AQYQPWVPG EDGQPSPGVD TQIFEDPREF LSHLEEYLRQ VGGSEEWLS QIQNHMNGPA KKWWFEKQGS VKNWVEFKKE FLQYSEGTL S REAIQRELDL PQKQGEPLDQ FLWRKRDLYQ TLYVDADEEE IIQYVVGTLQ PKLKRFLRHP LPKTLEQLIQ RGMEVQDDLE QAAEPAGPHL PVEDEAETLT PAPSSESVAS DRTQPE
<b>Tag:</b>	His-tag
<b>Predicted MW:</b>	47.4 kDa
<b>Concentration:</b>	lot specific
<b>Purity:</b>	>90% by SDS - PAGE
<b>Buffer:</b>	Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 0.15M NaCl, 10% glycerol, 1 mM DTT
<b>Preparation:</b>	Liquid purified protein
<b>Protein Description:</b>	Recombinant human ARC protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
<b>Storage:</b>	Store undiluted at 2-8°C for one week or (in aliquots) at -20°C to -80°C for longer. Avoid repeated freezing and thawing.
<b>Stability:</b>	Shelf life: one year from despatch.
<b>RefSeq:</b>	<a href="#">NP_056008</a>
<b>Locus ID:</b>	23237
<b>UniProt ID:</b>	<a href="#">Q7LC44</a>



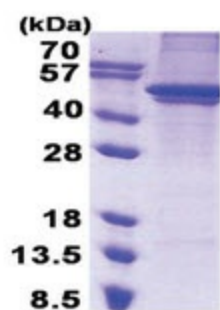
[View online »](#)

**Cytogenetics:** 8q24.3

**Synonyms:** Arg3.1; hArc

**Summary:** Master regulator of synaptic plasticity that self-assembles into virion-like capsids that encapsulate RNAs and mediate intercellular RNA transfer in the nervous system. ARC protein is released from neurons in extracellular vesicles that mediate the transfer of ARC mRNA into new target cells, where ARC mRNA can undergo activity-dependent translation. ARC capsids are endocytosed and are able to transfer ARC mRNA into the cytoplasm of neurons. Acts as a key regulator of synaptic plasticity: required for protein synthesis-dependent forms of long-term potentiation (LTP) and depression (LTD) and for the formation of long-term memory. Regulates synaptic plasticity by promoting endocytosis of AMPA receptors (AMPA receptors) in response to synaptic activity: this endocytic pathway maintains levels of surface AMPARs in response to chronic changes in neuronal activity through synaptic scaling, thereby contributing to neuronal homeostasis. Acts as a postsynaptic mediator of activity-dependent synapse elimination in the developing cerebellum by mediating elimination of surplus climbing fiber synapses. Accumulates at weaker synapses, probably to prevent their undesired enhancement. This suggests that ARC-containing virion-like capsids may be required to eliminate synaptic material. Required to transduce experience into long-lasting changes in visual cortex plasticity and for long-term memory (By similarity). Involved in postsynaptic trafficking and processing of amyloid-beta A4 (APP) via interaction with PSEN1 (By similarity). In addition to its role in synapses, also involved in the regulation of the immune system: specifically expressed in skin-migratory dendritic cells and regulates fast dendritic cell migration, thereby regulating T-cell activation (By similarity).[UniProtKB/Swiss-Prot Function]

### Product images:



15% SDS-PAGE (3ug)