

Product datasheet for **AR50840PU-N**

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

Product data:

Product Type:	Recombinant Proteins
Description:	ARC / ARG3.1 (1-396, His-tag) human recombinant protein, 50 µg
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	MGSSHHHHHH SSGLVPRGSH MELDHRTSGG LHAYPGPRGG QVAKPNVILQ IGKCRAEMLE HVRRTTHRLL AEVSKQVERE LKGLHRSVGK LESNLDGYVP TSDSQRWKKS IKACLCRCQE TIANLERWVK REMHVVREVF YRLERWADRL ESTGGKYPVG SESARHTVSV GVGGPESYCH EADGYDYTVS PYAITPPPA GELPGQEPAE AQYQPWVPG EDGQPSGPVD TQIFEDPREF LSHLEEYLRQ VGGSEEWLS QIQNHMNGPA KKWWFEKQGS VKNWVEFKKE FLQYSEGTL REAIQRELDL PQKQGEPLDQ FLWRKRDLYQ TLYVDADEEE IIQYVVGTLQ PKLKRFLRHP LPKTLEQLIQ RGMEVQDDLE QAAEPAGPHL PVEDEAETLT PAPNSESVA SDRTPQE
Tag:	His-tag
Predicted MW:	47.4 kDa
Concentration:	lot specific
Purity:	>90% by SDS - PAGE
Buffer:	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
Preparation:	Liquid purified protein
Protein Description:	Recombinant human ARC protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Storage:	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.
Stability:	Shelf life: one year from despatch.
RefSeq:	NP_056008
Locus ID:	23237
UniProt ID:	Q7LC44


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Cytogenetics: 8q24.3

Synonyms: KIAA0278

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:

