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Product datasheet for TP304129L

Arg 3.1 (ARC) (NM_015193) Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant protein of human activity-regulated cytoskeleton-associated protein (ARC), 1 mg
Species:	Human
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>RC204129 protein sequence Red=Cloning site Green=Tags(s) MELDHRTSGGLHAYPGPRGGQVAKPNVILQIGKCRAEMLEHVRRTHRHLLAEVSKQVERELKGLHRSVGK LESNLDGYVPTSDSQRWKKSIKACLCRCQETIANLERWVKREMHVWREVFYRLERWADRLESTGGKYPVG SESARHTVSVGVGGPESYCHEADGYDYTVSPYAITPPPAAGELPGQEPAEAQQYQPWVPGEDGQPSPGVD TQIFEDPREFLSHLEEYLRQVGGSEEYWLSQIQNHMNGPAKKWWEFKQGSVKNWVEFKKEFLQYSEGTLS REAIQRELDLPQKQGEPLDQFLWRKRDLYQTLYVDADEEEIIQYVVGTLQPKLKRFLRHPLPKTLEQLIQ RGMEVQDDLEQAAEPAGPHLPVEDEAETLTPAPNSESVASDRTQPE TRTRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Predicted MW:	45.1 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Preparation:	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C.
Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	NP_056008
Locus ID:	23237

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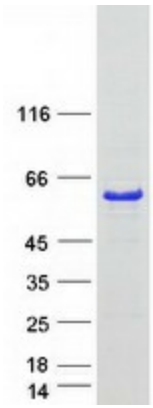
UniProt ID:	Q7LC44
RefSeq Size:	2948
Cytogenetics:	8q24.3
RefSeq ORF:	1188
Synonyms:	Arg3.1; hArc
Summary:	Master regulator of synaptic plasticity that self-assembles into virion-like capsids that encapsulate RNAs and mediate intercellular RNA transfer in the nervous system. ARC protein is released from 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 (AMPARs) 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:



Coomassie blue staining of purified ARC protein (Cat# [TP304129]). The protein was produced from HEK293T cells transfected with ARC cDNA clone (Cat# [RC204129]) using MegaTran 2.0 (Cat# [TT210002]).