

Product datasheet for PH304129

Arg 3.1 (ARC) (NM_015193) Human Mass Spec Standard

Product data:

Product Type:	Mass Spec Standards
Description:	ARC MS Standard C13 and N15-labeled recombinant protein (NP_056008)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC204129
Predicted MW:	45.3 kDa
Protein Sequence:	>RC204129 protein sequence Red=Cloning site Green=Tags(s) MELDHRTSGGLHAYPGPRGGQVAKPNVILQIGKCR AEMLEHVRRTHRHLLAEVSKQVERELKGLHRSVGK LESNLDGYVPTSDSQRWKSIIKACLRCQETIANLERWVKREMHVWREVFYRLERWADRLESTGGKYVPV SESARHTVSVGGPESYCHEADGYDYTVSPYAITPPPAAGELPGQEPAEAQQYQPWVPGEDGQPSPGVD TQIFEDPREFLSHLEELRQVGGSEYWLSQIQNHMNGPAKKWWEFKQGSVKNWVEFKKEFLQYSEGTL REAIQRELDLPQKQGEPLDQFLWRKRDLYQTLVYDADEEEIIQYVVGTLQPKLKRFLRHPLPKTLEQLIQ RGM EVQDDLEQA AEPAGPHLPVEDEAETLTPAPNSESVASDRTQPE TRTRPLEQKLI SEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- ¹³ C ₆ , ¹⁵ N ₄]-L-Arginine and [U- ¹³ C ₆ , ¹⁵ N ₂]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	<u>NP_056008</u>
RefSeq Size:	2948
RefSeq ORF:	1188
Synonyms:	Arg3.1; hArc
Locus ID:	23237



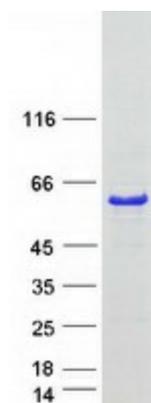
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UniProt ID: [Q7LC44](#)

Cytogenetics: 8q24.3

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) 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]).