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Trp63 antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI10596

Product Information

Application	WB
Primary Accession	Q9WV31
Other Accession	NM_018790, NP_061260
Reactivity	Human, Mouse, Rat, Zebrafish, Dog, Bovine
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	45321

Additional Information

Gene ID	11838
Alias Symbol	AI462811, Ket, MGC115972, P51/P63, P63, P73l, Tp63, Trp53rp1
Other Names	Activity-regulated cytoskeleton-associated protein, ARC/ARG3.1, mArc, Activity-regulated gene 3.1 protein homolog, Arg3.1, Arc {ECO:0000312|EMBL:AAD43586.1, ECO:0000312|MGI:MGI:88067}
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-Trp63 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	Trp63 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Arc {ECO:0000312|MGI:MGI:88067}
Function	Master regulator of synaptic plasticity that self-assembles into virion-like capsids that encapsulate RNAs and mediate intercellular RNA transfer in the nervous system (By similarity). 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 (By similarity). ARC capsids are endocytosed and are able to transfer ARC mRNA into the cytoplasm of neurons (By similarity). 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 (PubMed:24094104, PubMed:29264923, PubMed:31151856). 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 (PubMed:17088213, PubMed:20211139, PubMed:20228806). Acts as a postsynaptic mediator of activity-dependent synapse elimination in the developing cerebellum by mediating elimination of surplus climbing fiber synapses (PubMed:23791196). Accumulates at weaker synapses, probably to prevent their undesired enhancement (By similarity). This suggests that ARC-containing virion- like capsids may be required to eliminate synaptic material (By similarity). Required to transduce experience into long-lasting changes in visual cortex plasticity and for long-term memory (PubMed:17088210, PubMed:20228806). Involved in postsynaptic trafficking and processing of amyloid-beta A4 (APP) via interaction with PSEN1 (PubMed:22036569). 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 (PubMed:28783680).
Cellular Location	Extracellular vesicle membrane {ECO:0000250|UniProtKB:Q63053}; Lipid-anchor. Postsynaptic cell membrane; Lipid-anchor. Synapse {ECO:0000250|UniProtKB:Q63053} Postsynaptic density {ECO:0000250|UniProtKB:Q63053}. Early endosome membrane. Cell projection, dendrite. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q63053}. Cytoplasm, cell cortex {ECO:0000250|UniProtKB:Q63053}. Cell projection, dendritic spine {ECO:0000250|UniProtKB:Q63053}. Cytoplasmic vesicle, secretory vesicle, acrosome. Cytoplasmic vesicle, clathrin- coated vesicle membrane {ECO:0000250|UniProtKB:Q7LC44}. Note=Forms virion-like extracellular vesicles that are released from neurons (By similarity). Enriched in postsynaptic density of dendritic spines (By similarity). Targeted to inactive synapses following interaction with CAMK2B in the kinase inactive state (By similarity). Accumulation at weaker synapses may be required to prevent their undesired enhancement (By similarity). Associated with the cell cortex of neuronal soma and dendrites (By similarity). Associated with the sperm tail (PubMed:12493697). {ECO:0000250|UniProtKB:Q63053, ECO:0000269|PubMed:12493697}
Tissue Location	Expressed in brain and testis (PubMed:12493697). In primary visual cortex, detected in all cortical layers with the exception of layer 5: present at highest level in layers 2/3 and 4, the predominant sites of ocular dominance plasticity (at protein level) (PubMed:20228806). Also expressed in skin-migratory dendritic cells (PubMed:28783680).

Images