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MEGF10 Rabbit pAb

Catalog # AP96564

Product Information

Application	WB
Primary Accession	Q96KG7
Other Accession	Q96KG7
Reactivity	Human
Predicted	Rat, Pig, Mouse, Rabbit, Chicken, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	122205
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human MEGF10
Epitope Specificity	1041-1140/1140
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the MEGF family.Contains 15 EGF-like domains.Contains 1 EMI domain.
SUBUNIT	Homopolymer (Probable). Interacts with GULP1 and ABCA1. Interacts with AP2M1. Does not interact with MEGF11.
Post-translational modifications	Phosphorylated on tyrosine residues.Ubiquinated; mono- and polyubiquitinated forms are detected.
DISEASE	Defects in MEGF10 are the cause of myopathy, early-onset, areflexia, respiratory distress, and dysphagia (EMARDD) [MIM:614399]. An autosomal recessive congenital myopathy characterized by onset at birth, or early in infancy, of respiratory distress caused by diaphragmatic weakness. Additional features are dysphagia resulting in poor feeding, failure to thrive, poor head control, facial weakness, cleft palate, contractures and scoliosis. Affected individuals become ventilator-dependent, and most require feeding by gastrostomy. The disorder results in severe muscle weakness and most patients never achieve walking. Death from respiratory failure in childhood occurs in about half of patients. Muscle biopsy shows myopathic changes, replacement of myofibers with fatty tissue, small and incompletely fused muscle fibers, and variation in fiber size. Short regions of sarcomeric disorganization with few or no mitochondria (minicores) have been observed in some cases.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	MEGF10 is a 1,140 amino acid protein encoded by the human gene MEGF10. MEGF10 belongs to the MEGF family and contains fifteen EGF-like domains and one EMI domain. The engulfment of dying cells is a specialized form of phagocytosis that is highly conserved across evolution and is mediated by the concerted action of several molecules. MEGF10 is an engulfment receptor protein that localizes to the plasma membrane in a punctuated pattern. The MEGF10 protein shares structural similarities with nematode engulfment receptor cell death abnormal-1 (CED-1). MEGF10 function is modulated by the ATP binding cassette transporter ABCA1, which is an ortholog to CED-7. It is

expressed at the cell surface in clusters around cell corpses during engulfment, and during the engulfment of apoptotic thymocytes is recruited to the bottom of the forming phagocytic cup.

Additional Information

Gene ID	84466
Other Names	CMYO10A; CMYO10B; CMYP10A; CMYP10B; EMARDD; SR-F3; MEG10_HUMAN; MEGF10; Multiple EGF-like domains protein 10; KIAA1780; multiple EGF like domains 10; multiple EGF-like-domains 10
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	MEGF10 (HGNC:29634)
Synonyms	KIAA1780
Function	Membrane receptor involved in phagocytosis by macrophages and astrocytes of apoptotic cells. Receptor for C1q, an eat-me signal, that binds phosphatidylserine expressed on the surface of apoptotic cells (PubMed:27170117). Cooperates with ABCA1 within the process of engulfment. Promotes the formation of large intracellular vacuoles and may be responsible for the uptake of amyloid-beta peptides (PubMed:17643423, PubMed:20828568). Necessary for astrocyte-dependent apoptotic neuron clearance in the developing cerebellum (PubMed:27170117). Plays role in muscle cell proliferation, adhesion and motility. Is also an essential factor in the regulation of myogenesis. Controls the balance between skeletal muscle satellite cells proliferation and differentiation through regulation of the notch signaling pathway (PubMed:28498977, Ref.16). May also function in the mosaic spacing of specific neuron subtypes in the retina through homotypic retinal neuron repulsion. Mosaics provide a mechanism to distribute each cell type evenly across the retina, ensuring that all parts of the visual field have access to a full set of processing elements (PubMed:17498693, PubMed:17643423, PubMed:20828568, PubMed:22101682, PubMed:27170117, PubMed:28498977).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cell projection, phagocytic cup. Note=Enriched at the sites of contact with apoptotic thymocyte cells (PubMed:17205124). Forms an irregular, mosaic-like adhesion pattern in region of the cell surface that becomes firmely fixed to the substrate. Expressed at the cell surface in clusters around cell corpses during engulfment. During the engulfment of apoptotic thymocytes, recruited at the bottom of the forming phagocytic cup (PubMed:17498693). Colocalizes with ABCA1 in absence of any phagocytic challenge (PubMed:17205124). Does not localize within lamellipodia (PubMed:17498693). Does not localize with MEGF11 (PubMed:17498693).
Tissue Location	Expressed in muscle (at protein level).

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