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ACTL7A Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10469a

Product Information

Application	WB, E
Primary Accession	Q9Y615
Other Accession	Q4R6Q3, NP_006678.1
Reactivity	Human
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22393
Calculated MW	48644
Antigen Region	41-67

Additional Information

Gene ID	10881
Other Names	Actin-like protein 7A, Actin-like-7-alpha, ACTL7A
Target/Specificity	This ACTL7A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 41-67 amino acids from the N-terminal region of human ACTL7A.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ACTL7A Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ACTL7A
Function	Essential for normal spermatogenesis and male fertility. Required for normal sperm head morphology, acroplaxome formation, acrosome attachment, and acrosome granule stability. May anchor and stabilize

	acrosomal adherence to the acroplaxome at least in part by facilitating the presence of F-actin in the subacrosomal space (By similarity). May play an important role in formation and fusion of Golgi-derived vesicles during acrosome biogenesis (PubMed:32923619).
Cellular Location	Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q9QY84}. Golgi apparatus {ECO:0000250|UniProtKB:Q9QY84}. Cytoplasm {ECO:0000250|UniProtKB:Q9QY84}. Nucleus {ECO:0000250|UniProtKB:Q9QY84} Cytoplasmic vesicle, secretory vesicle, acrosome Note=Detected at the Golgi apparatus during acrosome biogenesis Detected at the subacrosomal layer in round spermatids. Detected in sperm head and tail. {ECO:0000250|UniProtKB:Q9QY84}
Tissue Location	Strongly expressed in testis. Also expressed in other tissues.

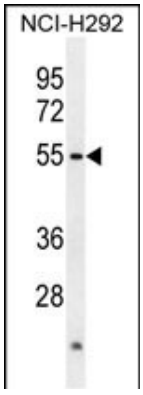
Background

ACTL7A is a member of a family of actin-related proteins (ARPs) which share significant amino acid sequence identity to conventional actins. Both actins and ARPs have an actin fold, which is an ATP-binding cleft, as a common feature. The ARPs are involved in diverse cellular processes, including vesicular transport, spindle orientation, nuclear migration and chromatin remodeling. ACTL7A (ACTL7A), and related gene, ACTL7B, are intronless, and are located approximately 4 kb apart in a head-to-head orientation within the familial dysautonomia candidate region on 9q31. Based on mutational analysis of the ACTL7A gene in patients with this disorder, it was concluded that it is unlikely to be involved in the pathogenesis of dysautonomia. The ACTL7A gene is expressed in a wide variety of adult tissues, however, its exact function is not known.

References

Aberg, K., et al. Hum. Biol. 80(2):99-123(2008)
Humphray, S.J., et al. Nature 429(6990):369-374(2004)
Garvalov, B.K., et al. J. Cell Biol. 161(1):33-39(2003)
Coutts, A.S., et al. J. Cell. Sci. 116 (PT 5), 897-906 (2003) :
Chadwick, B.P., et al. Genomics 58(3):302-309(1999)

Images



ACTL7A Antibody (N-term) (Cat. #AP10469a) western blot analysis in NCI-H292 cell line lysates (35ug/lane).This demonstrates the ACTL7A antibody detected the ACTL7A protein (arrow).