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BSCL2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10112a

Product Information

Application	IHC-P, WB, E
Primary Accession	Q96G97
Other Accession	Q5E9P6, NP_001116427.1, NP_001124174.1, NP_116056.3
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19045
Calculated MW	44392
Antigen Region	78-107

Additional Information

Gene ID	26580
Other Names	Seipin, Bernardinelli-Seip congenital lipodystrophy type 2 protein, BSCL2
Target/Specificity	This BSCL2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 78-107 amino acids from the N-terminal region of human BSCL2.
Dilution	IHC-P~~1:100~500 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	BSCL2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BSCL2 {ECO:0000303|PubMed:18458148, ECO:0000312|HGNC:HGNC:15832}
Function	Mediates the formation of lipid droplets during the differentiation and maturation of adipocytes (PubMed:19278620, PubMed:21533227, PubMed:27564575, PubMed:30293840, PubMed:31708432). Together with

	LDAF1, defines the sites of lipid droplet formation in the endoplasmic reticulum and promotes the aggregation of triacylglycerol molecules to form the core of a lipid droplet (nucleation) in the endoplasmic reticulum and drive budding of lipid droplets into the cytoplasm (PubMed:31708432). BSCL2 and LDAF1 also regulate protein and lipid delivery from the endoplasmic reticulum into growing lipid droplets (PubMed:27879284, PubMed:31178403). During early adipogenesis, BSCL2 inhibits GPAT3 and GPAT4 activity, thereby preventing phosphatidic acid accumulation that could antagonize PPARG and block differentiation (By similarity). This inhibition is then relieved by ADIG during adipocyte maturation, allowing expansion of lipid droplets (By similarity). Regulates the maturation of ZFYVE1- positive nascent lipid droplets and the function of the RAB18-ZFYVE1 complex in mediating the formation of endoplasmic reticulum-lipid droplet contacts (PubMed:30970241). Binds anionic phospholipids including phosphatidic acid (PubMed:30293840).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein. Lipid droplet Note=Localizes at endoplasmic reticulum-lipid droplets (ER-LD) contact sites.
Tissue Location	Expressed in motor neurons in the spinal cord and cortical neurons in the frontal lobe (at protein level). Highly expressed in brain, testis and adipose tissue

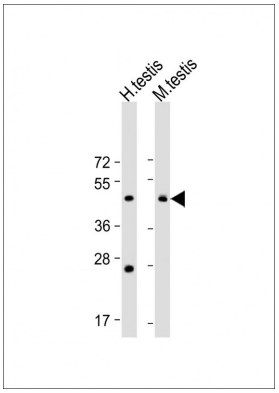
Background

This gene encodes protein seipin, which is located in the endoplasmic reticulum and may be important for lipid droplet morphology. Mutations in this gene have been associated with congenital generalized lipodystrophy type 2 or Berardinelli-Seip syndrome, a rare autosomal recessive disease characterized by a near absence of adipose tissue and severe insulin resistance. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.

References

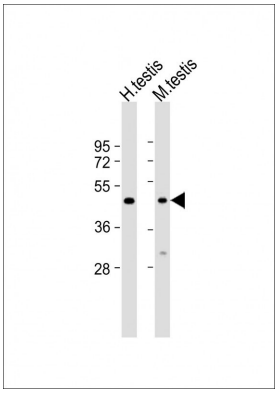
Rakocevic-Stojanovic, V., et al. J. Neurol. Sci. 296 (1-2), 107-109 (2010) :
Luigetti, M., et al. Muscle Nerve 42(3):448-451(2010)
Nishiyama, A., et al. Pediatr Int 51(6):775-779(2009)
Wu, Y.R., et al. J. Neurol. Neurosurg. Psychiatr. 80(10):1180-1181(2009)
Chen, W., et al. Endocrinology 150(10):4552-4561(2009)

Images

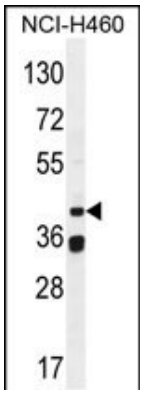


All lanes : Anti-BSCL2 Antibody (N-term) at 1:2000 dilution Lane 1: Human testis lysate Lane 2: Mouse testis lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 44 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

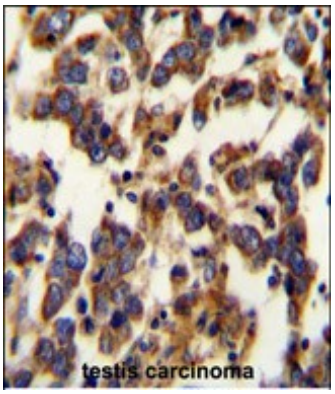
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BSCL2 Antibody (N-term) (Cat. #AP10112a) western blot analysis in NCI-H460 cell line lysates (35ug/lane).This demonstrates the BSCL2 antibody detected the BSCL2 protein (arrow).



BSCL2 Antibody (N-term) (Cat. #AP10112a) immunohistochemistry analysis in formalin fixed and paraffin embedded human testis carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the BSCL2 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.