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MBTPS2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12972a

Product Information

Application	WB, IHC-P, E
Primary Accession	O43462
Other Accession	Q8CHX6, Q0III2, NP_056968.1
Reactivity	Human
Predicted	Bovine, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32439
Calculated MW	57444
Antigen Region	15-44

Additional Information

Gene ID	51360
Other Names	Membrane-bound transcription factor site-2 protease, Endopeptidase S2P, Sterol regulatory element-binding proteins intramembrane protease, SREBPs intramembrane protease, MBTPS2, S2P
Target/Specificity	This MBTPS2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 15-44 amino acids from the N-terminal region of human MBTPS2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	MBTPS2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MBTPS2 {ECO:0000303|PubMed:19361614, ECO:0000312|HGNC:HGNC:15455}

Function	Zinc metalloprotease that mediates intramembrane proteolysis of proteins such as ATF6, ATF6B, SREBF1/SREBP1 and SREBF2/SREBP2 (PubMed:10805775, PubMed:11163209). Catalyzes the second step in the proteolytic activation of the sterol regulatory element-binding proteins (SREBPs) SREBF1/SREBP1 and SREBF2/SREBP2: cleaves SREBPs within the first transmembrane segment, thereby releasing the N- terminal segment with a portion of the transmembrane segment attached (PubMed:10805775, PubMed:27380894, PubMed:9659902). Mature N-terminal SREBP fragments shuttle to the nucleus and activate gene transcription (PubMed:10805775, PubMed:27380894, PubMed:9659902). Also mediates the second step in the proteolytic activation of the cyclic AMP-dependent transcription factor ATF-6 (ATF6 and ATF6B) (PubMed:11163209). Involved in intramembrane proteolysis during bone formation (PubMed:27380894). In astrocytes and osteoblasts, upon DNA damage and ER stress, mediates the second step of the regulated intramembrane proteolytic activation of the transcription factor CREB3L1, leading to the inhibition of cell- cycle progression (PubMed:16417584).
Cellular Location	Membrane; Multi- pass membrane protein. Cytoplasm. Golgi apparatus membrane; Multi-pass membrane protein
Tissue Location	Expressed in heart, brain, placenta, lung, liver, muscle, kidney and pancreas.

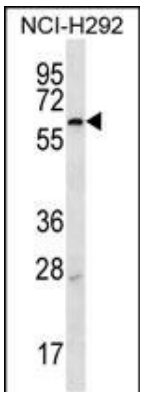
Background

This gene encodes a intramembrane zinc metalloprotease, which is essential in development. This protease functions in the signal protein activation involved in sterol control of transcription and the ER stress response. Mutations in this gene have been associated with ichthyosis follicularis with atrichia and photophobia (IFAP syndrome); IFAP syndrome has been quantitatively linked to a reduction in cholesterol homeostasis and ER stress response.

References

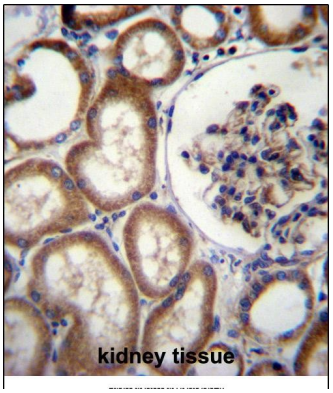
Ming, A., et al. Pediatr Dermatol 26(4):427-431(2009)
Oeffner, F., et al. Am. J. Hum. Genet. 84(4):459-467(2009)
Lu, Y., et al. J. Lipid Res. 49(12):2582-2589(2008)
Shen, J., et al. J. Biol. Chem. 279(41):43046-43051(2004)
Lee, K., et al. Genes Dev. 16(4):452-466(2002)

Images



MBTPS2 Antibody (N-term) (Cat. #AP12972a) western blot analysis in NCI-H292 cell line lysates (35ug/lane).This demonstrates the MBTPS2 antibody detected the MBTPS2 protein (arrow).

MBTPS2 Antibody (N-term) (Cat. #AP12972a)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue



followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of MBTPS2 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.