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MBTPS1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50769

Product Information

Application	WB
Primary Accession	Q14703
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	polyclonal
Calculated MW	117749

Additional Information

Gene ID	8720
Other Names	Membrane-bound transcription factor site-1 protease, Endopeptidase S1P, Subtilisin/kexin-isozyme 1, SKI-1, MBTPS1, KIAA0091, S1P, SKI1
Dilution	WB~~ 1:1000
Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.
Storage Conditions	-20℃

Protein Information

Name	MBTPS1 (HGNC:15456)
Function	Serine protease that cleaves after hydrophobic or small residues, provided that Arg or Lys is in position P4: known substrates include SREBF1/SREBP1, SREBF2/SREBP2, BDNF, GNPTAB, ATF6, ATF6B and FAM20C (PubMed:10644685, PubMed:12782636, PubMed:21719679, PubMed:34349020). Cleaves substrates after Arg-Ser-Val-Leu (SREBP2), Arg-His-Leu-Leu (ATF6), Arg-Gly-Leu-Thr (BDNF) and its own propeptide after Arg-Arg-Leu-Leu (PubMed:10644685, PubMed:21719679). Catalyzes the first step in the proteolytic activation of the sterol regulatory element-binding proteins (SREBPs) SREBF1/SREBP1 and SREBF2/SREBP2 (PubMed:12782636). Also mediates the first step in the proteolytic activation of the cyclic AMP-dependent transcription factor ATF-6 (ATF6 and ATF6B) (PubMed:12782636). Mediates the protein cleavage of GNPTAB into subunit alpha and beta, thereby participating in biogenesis of lysosomes (PubMed:21719679). Cleaves the propeptide from FAM20C which is required for FAM20C secretion from the Golgi apparatus membrane and for enhancement of FAM20C kinase activity, promoting osteoblast differentiation and biomineralization (PubMed:34349020). Involved in the regulation of

	M6P-dependent Golgi-to-lysosome trafficking of lysosomal enzymes (PubMed:21719679, PubMed:30046013). It is required for the activation of CREB3L2/BBF2H7, a transcriptional activator of MIA3/TANGO and other genes controlling mega vesicle formation (PubMed:30046013). Therefore, it plays a key role in the regulation of mega vesicle-mediated collagen trafficking (PubMed:30046013). Promotes FAD binding to the ETFA/ETFB complex and is therefore involved in mitochondrial respiratory chain regulation (PubMed:35362222). In astrocytes and osteoblasts, upon DNA damage and ER stress, mediates the first step of the regulated intramembrane proteolytic activation of the transcription factor CREB3L1, leading to the inhibition of cell-cycle progression (PubMed:16417584).
Cellular Location	Endoplasmic reticulum membrane; Single-pass type I membrane protein. Golgi apparatus membrane; Single-pass type I membrane protein. Secreted. Mitochondrion. Note=May sort to other organelles, including lysosomal and/or endosomal compartments. The 98 kDa form is secreted.
Tissue Location	Widely expressed..

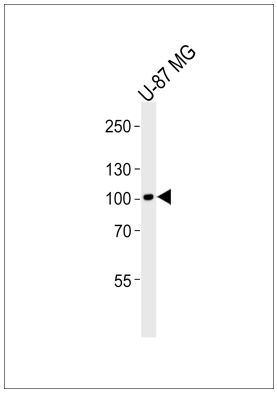
Background

Catalyzes the first step in the proteolytic activation of the sterol regulatory element-binding proteins (SREBPs). Other known substrates are BDNF and ATF6. Cleaves after hydrophobic or small residues, provided that Arg or Lys is in position P4. Cleaves known substrates after Arg-Ser-Val-Leu (SERBP-2), Arg-His-Leu-Leu (ATF6), Arg-Gly-Leu-Thr (BDNF) and its own propeptide after Arg-Arg-Leu-Leu.

References

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Images



Western blot analysis of lysate from U-87 MG cell line,using MBTPS1 Antibody(AP50769). AP50769 was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysate at 35ug.

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