

#2157 Store at -20°C

MBTPS2 Antibody


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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	M	Endogenous	57	Rabbit	#O43462	51360

Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	MBTPS2 Antibody detects endogenous levels of total MBTPS2 protein.	
Species predicted to react based on 100% sequence homology:	Human	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence of mouse MBTPS2. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Membrane-bound transcription factor protease site 2 (MBTPS2), also known as site-2 protease (S2P), is a zinc metalloprotease in the Golgi membrane (1,2,3). It regulates cholesterol metabolism (1,2) and unfolded protein response (UPR) (3,4). When cells are deprived of cholesterol, sterol regulatory element-binding proteins (SREBPs) move from the endoplasmic reticulum (ER) to the Golgi apparatus and are cleaved by site-1 protease (S1P) (5,6) and site-2 protease (1,6) sequentially to release the active amino-terminal domains. These amino-terminal domains of SREBPs then translocate into the nucleus to induce expression of genes for cholesterol biosynthesis. During UPR, activating transcription factor 6 (ATF6) transports from ER to Golgi apparatus and is cleaved by S1P and S2P to release a cytosolic fragment. This cytosolic fragment relocates to the nucleus and activates the UPR gene expression (7).	
Background References	<ol style="list-style-type: none"> 1. Rawson, R.B. et al. (1997) <i>Mol. Cell</i> 1, 47-57. 2. Zelenski, N.G. et al. (1999) <i>J. Biol. Chem.</i> 274, 21973-21980. 3. Shen, J. and Prywes, R. (2004) <i>J. Biol. Chem.</i> 279, 43046-43051. 4. Lee, K. et al. (2002) <i>Genes Dev.</i> 16, 452-466. 5. DeBose-Boyd, R.A. et al. (1999) <i>Cell</i> 99, 703-712. 6. Brown, M.S. and Goldstein, J.L. (1999) <i>Proc. Natl. Acad. Sci. USA</i> 96, 11041-11048. 7. Kaufman, R.J. et al. (2002) <i>Nat. Rev. Mol. Cell Biol.</i> 3, 411-421. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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