

MBTPS2 Antibody

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

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| W | 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

1. Rawson, R.B. et al. (1997) *Mol. Cell* 1, 47-57.
2. Zelenski, N.G. et al. (1999) *J. Biol. Chem.* 274, 21973-21980.
3. Shen, J. and Prywes, R. (2004) *J. Biol. Chem.* 279, 43046-43051.
4. Lee, K. et al. (2002) *Genes Dev.* 16, 452-466.
5. DeBose-Boyd, R.A. et al. (1999) *Cell* 99, 703-712.
6. Brown, M.S. and Goldstein, J.L. (1999) *Proc. Natl. Acad. Sci. USA* 96, 11041-11048.
7. Kaufman, R.J. et al. (2002) *Nat. Rev. Mol. Cell Biol.* 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

W: Western Blotting

Cross-Reactivity Key

M: Mouse

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