

CBS (D8F2P) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R	Endogenous	61	Rabbit IgG	#P35520	875

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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

CBS (D8F2P) Rabbit mAb recognizes endogenous levels of total CBS protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu220 of human CBS protein.

Background

Cystathionine beta-synthase (CBS) is a key enzyme involved in sulfur amino acid metabolism because it catalyzes the formation of cystathionine from serine and homocysteine (1,2). The CBS protein contains a heme-binding domain that modulates enzyme activity by sensing redox changes or carbon monoxide binding (1). S-adenosylmethionine binds the carboxyl-terminal CBS domain to allosterically regulate CBS catalytic activity (3,4). In addition to catalyzing cystathionine formation, CBS also catalyzes the generation of hydrogen sulfide, a neuromodulator in the brain, through alternative reactions (5,6). Mutations in the corresponding *CBS* gene result in homocystinuria, an autosomal recessive disorder characterized by abnormal sulfur metabolism, mental retardation, eye anomalies, and vascular disease (7).

Background References

1. Banerjee, R. and Zou, C.G. (2005) *Arch Biochem Biophys* 433, 144-56.
2. Jhee, K.H. and Kruger, W.D. (2005) *Antioxid Redox Signal* 7, 813-22.
3. Ereño-Orbea, J. et al. (2014) *Proc Natl Acad Sci U S A* 111, E3845-52.
4. McCorvie, T.J. et al. (2014) *J Biol Chem* 289, 36018-30.
5. Kimura, H. (2010) *Antioxid Redox Signal* 12, 1111-23.
6. Zhang, Y. et al. (2013) *Mol Cell Biol* 33, 1104-13.
7. Kraus, J.P. et al. (1999) *Hum Mutat* 13, 362-75.

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

H: Human **M:** Mouse **R:** Rat

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