BACKGROUND
Betaine-homocysteine methyltransferase (BHMT) is a zinc-dependent cytosolic protein that catalyzes the conversion of betaine and homocysteine to dimethylglycine and methionine, respectively. BHMT is highly expressed in rat liver, and its expression is regulated by dietary methionine and choline. In humans, S-adenosylmethionine (SAM) downregulates BHMT expression by inducing NFκB, which acts as a repressor for the BHMT gene. Lowered BHMT levels can lead to ER (endoplasmic reticulum) stress. Mutations in the gene encoding BHMT may lead to hyperhomocysteinemia, a medical condition characterized by abnormally large amounts of homocysteine in the blood, which may be a risk factor for cardiovascular and cerebrovascular diseases.

REFERENCES

APPLICATIONS
BHMT (3D6) is recommended for detection of BHMT of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BHMT siRNA (h): sc-91965, BHMT siRNA (m): sc-141697, BHMT shRNA Plasmid (h): sc-91965-SH, BHMT shRNA Plasmid (m): sc-141697-SH, BHMT shRNA (h) Lentiviral Particles: sc-91965-V and BHMT shRNA (m) Lentiviral Particles: sc-141697-V.

Molecular Weight of BHMT: 45 kDa.

Positive Controls: BHMT (m): 293T Lysate: sc-118804, BHMT (m2): 293T Lysate: sc-118805 or mouse liver extract: sc-2256.

DATA

BHMT (3D6): sc-69708. Western blot analysis of BHMT expression in non-transfected: sc-117752 (A) and mouse BHMT transfected: sc-118805 (B) 293T whole cell lysates and mouse liver tissue extract (C).

BHMT (D06): sc-69708. Western blot analysis of BHMT expression in non-transfected: sc-117752 (A) and mouse BHMT transfected: sc-118805 (B) 293T whole cell lysates.

STORAGE
Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE
For research use only, not for use in diagnostic procedures.

PROTOCOLS
See our web site at www.scbt.com for detailed protocols and support products.