BACKGROUND

Strongly expressed in human liver and pancreas, with weaker expression in heart and brain, the cytoplasmic protein cystathionine β-synthase (CBS) operates in the first step of homocysteine transulfuration. CBS, which belongs to the cysteine synthase/cystathionine β-synthase family of proteins, catalyzes the formation of cystathionine from the thrombogenic amino acid homocysteine using pyridoxal phosphate cofactor. Allosteric activation by adenosylmethionine regulates CBS activity. Deficiencies in CBS are associated with homocystinuria, a recessively inherited error in sulfur amino acid metabolism that affects many organs and tissues. Symptoms of homocystinuria include arteriosclerosis, thrombosis, dislocated optic lenses, mental retardation and skeletal abnormalities.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: CBS (human) mapping to 21q22.3; Cbs (mouse) mapping to 17B1.

SOURCE

CBS (A-2) is a mouse monoclonal antibody raised against amino acids 101-400 mapping within an internal region of CBS of human origin.

PRODUCT

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CBS (A-2) is recommended for detection of CBS of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


Molecular Weight of CBS: 63 kDa.

Positive Controls: CBS (h2): 293 Lysate: sc-112304, HeLa whole cell lysate: sc-2200 or rat liver tissue extract: sc-2395.

STORAGE

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

DATA

CBS (A-2): sc-133208. Western blot analysis of CBS expression in non-transfected: sc-110760 (A) and human CBS transfected: sc-112304 (B) 293 whole cell lysates and rat liver tissue extract (C).

CBS (A-2): sc-133208. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS


RESEARCH USE

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

See CBS (B-4): sc-133154 for CBS antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.