BACKGROUND
MDH2 (malate dehydrogenase, NAD mitochondrial), also known as MDH, M0R1 or M-MDH, is a 338 amino acid that belongs to the LDH/MDH super-family. MDH2 localizes to the mitochondria and may play a critical role in the malate-aspartate shuttle that operates in the metabolic coordination between cytosol and mitochondria. MDH2 utilizes the NAD/NADH cofactor system in the citric acid cycle to catalyze the reversible oxidation of malate to oxaloacetate. Oxaloacetate is involved in many important metabolic pathways including amino acid synthesis, gluconeogenesis and facilitation of the exchange of metabolites between cytoplasm and subcellular organelles.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: MDH2 (human) mapping to 7q11.23; Mdh2 (mouse) mapping to 5 G2.

SOURCE
MDH2 (1G12) is a mouse monoclonal antibody raised against amino acids 134-246 representing partial length MDH2 of human origin.

PRODUCT
Each vial contains 100 µg IgG2a kappa light chain in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS
MDH2 (1G12) is recommended for detection of MDH2 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 MDH2 siRNA (h): sc-89622, MDH2 siRNA (m): sc-149339, MDH2 shRNA Plasmid (h): sc-89622-SH, MDH2 shRNA Plasmid (m): sc-149339-SH, MDH2 shRNA (h) Lentiviral Particles: sc-89622-V and MDH2 shRNA (m) Lentiviral Particles: sc-149339-V.

Molecular Weight of MDH2: 36 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

RECOMMENDED SUPPORT REAGENTS
To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA

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.