**BACKGROUND**

Cytosolic malate dehydrogenase (MDHC or cMDH) is an important NAD-dependent enzyme involved in glycolysis and the formation of oxaloacetate and NADH from L-malate and NAD. MDHC is highly expressed in brain, heart and skeletal muscle and plays a role in energy production for muscle contraction, transmission of neuronal signals, absorption/resorption pathways, collagen-supporting functions, and dead cell phagocytosis, as well as pathways involved in gas exchange and cell division. Furthermore, MDHC is a regulatory subunit of the nucleic acid-conducting channel (NACH). MDHC functions as a homodimer and is highly conserved in plants, animals, and bacteria. The activity of MDHC is controlled by the sesquiterpenoid juvenile hormone (JH) and the steroid hormone ecdysone.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: MDH1 (human) mapping to 2p13.3; Mdh1 (mouse) mapping to 11A3.1.

**SOURCE**

MDHC (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MDHC of human origin.

**STORAGE**

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

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-49233 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

MDHC (G-20) is recommended for detection of MDHC (malate dehydrogenase, cytoplasmic) 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MDHC (G-20) is also recommended for detection of MDHC (malate dehydrogenase, cytoplasmic) in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MDHC siRNA (h): sc-61012, MDHC siRNA (m): sc-61013, MDHC shRNA Plasmid (h): sc-61012-SH, MDHC shRNA Plasmid (m): sc-61013-SH, MDHC shRNA (h) Lentiviral Particles: sc-61012-V and MDHC shRNA (m) Lentiviral Particles: sc-61013-V.

Molecular Weight of MDHC: 36 kDa.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

**DATA**

MDHC (G-20): sc-49233. Western blot analysis of MDHC expression in HS 181.Tes whole cell lysate.

**RESEARCH USE**

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