DLD (G-2): sc-365977

**BACKGROUND**

DLD (dihydrolipoyl dehydrogenase or dihydrolipoamide dehydrogenase), also known as GCSL (glucose cleavage system L protein), PHE3, DLDH or LAD, is a member of the class I pyridine nucleotide-disulfide oxidoreductase family. DLD is a flavin-dependent oxidoreductase and functions as a component of the α-keto acid dehydrogenase, the pyruvate dehydrogenase, the α-ketoglutarate dehydrogenase, the branched-chain α-keto acid dehydrogenase and as the L protein in the mitochondrial glycerate cleavage system. DLD localizes to the mitochondrial matrix and exists as a monomer, homodimer or tetramer that is required for energy metabolism in all eukaryotes. More specifically, DLD generates NADH and lipoic acid from dihydrolipoic acid and NAD+. The DLD homodimer catalyzes the opposite reaction. Mutations in the gene encoding DLD can result in MSUD (maple syrup urine disease) and congenital infantile lactic acidosis.

**CHROMOSOMAL LOCATION**

Genetic locus: DLD (human) mapping to 7q31.1; Dld (mouse) mapping to 12 A3.

**SOURCE**

DLD (G-2) is a mouse monoclonal antibody raised against amino acids 356-509 mapping at the C-terminus of DLD of human origin.

**PRODUCT**

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

DLD (G-2) is available conjugated to agaroše (sc-365977 AC), 500 μg/0.25 ml agaroše in 1 ml, for IP; to HRP (sc-365977 HRP), 200 μg/ml, for WB, IHCP and ELISA; to either phycoerythrin (sc-365977 PE), fluorescein (sc-365977 FITC), Alexa Fluor® 488 (sc-365977 AF488), Alexa Fluor® 546 (sc-365977 AF546), Alexa Fluor® 594 (sc-365977 AF594) or Alexa Fluor® 647 (sc-365977 AF647), 200 μg/ml, for WB (RGB), IF, IHCP and FCM; and to either Alexa Fluor® 680 (sc-365977 AF680) or Alexa Fluor® 790 (sc-365977 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

DLD (G-2) is recommended for detection of DLD 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).

DLD (G-2) is also recommended for detection of DLD in additional species, including equine, canine and bovine.

Suitable for use as control antibody for DLD siRNA (h): sc-62218, DLD siRNA (m): sc-62219, DLD shRNA Plasmid (h): sc-62218-SH, DLD shRNA Plasmid (m): sc-62219-SH, DLD shRNA (h) Lentiviral Particles: sc-62218-V and DLD shRNA (m) Lentiviral Particles: sc-62219-V.

Molecular Weight of DLD monomer: 50 kDa.

Molecular Weight of DLD homodimer: 100 kDa.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1. Western Blotting: use m-IgG® BP-HRP (sc-516102) or m-IgG® 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**

![DLD (G-2) Western blot analysis of DLD expression in Daudi (A), PC-3 (B), NIH/3T3 (C), Solla (D), L6 (E) and CVCAH-3 (F) whole cell lysates.](image)

**SELECT PRODUCT CITATIONS**


**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.

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