DHFR (A-9): sc-377091

**BACKGROUND**

Dihydrofolate reductase (DHFR) catalyzes the NADPH-dependent reduction of dihydrofolate to tetrahydrofolate, and is a crucial enzyme for the synthesis of purines, pyrimidines and some amino acids. Inhibition of the activity of this enzyme leads to arrest of DNA synthesis and cell death. Gene expression of methotrexate (MTX)-resistant variants of DHFR in normal hematopoietic cells is a potential strategy to permit administration of larger doses of MTX by alleviating drug toxicity in normal cells and tissues that are drug sensitive.

**CHROMOSOMAL LOCATION**

Genetic locus: DHFR (human) mapping to 5q14.1, DHFRL1 (human) mapping to 3q11.1; Dhfr (mouse) mapping to 13 C3.

**SOURCE**

DHFR (A-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 125-165 near the C-terminus of DHFR 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.

DHFR (A-9) is available conjugated to agarose (sc-377091 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377091 HRP), 200 µg/ml, for WB, IHC (and ELISA); to either phycocyanin (sc-377091 PE), fluorescein (sc-377091 FITC), Alexa Fluor® 488 (sc-377091 AF488), Alexa Fluor® 546 (sc-377091 AF546), Alexa Fluor® 594 (sc-377091 AF594) or Alexa Fluor® 647 (sc-377091 AF647), 200 µg/ml, for WB (RGB), IF, IHC (and FCM); and to either Alexa Fluor® 680 (sc-377091 AF680) or Alexa Fluor® 790 (sc-377091 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377091 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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**APPLICATIONS**

DHFR (A-9) is recommended for detection of DHFR and DHFRL1 of human origin and DHFR of mouse and rat 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).

Suitable for use as control antibody for DHFR siRNA (h): sc-37078, DHFR siRNA (m): sc-37079, DHFR shRNA Plasmid: sc-37078-SH, DHFR shRNA Plasmid (m): sc-37079-SH, DHFR shRNA (h) Lentiviral Particles: sc-37078-V and DHFR shRNA (m) Lentiviral Particles: sc-37079-V.

Molecular Weight of DHFR: 25 KDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or Hep G2 cell lysate: sc-2227.

**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®

**DATA**

![Western blot analysis](image1)

**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.