SANTA CRUZ BIOTECHNOLOGY, INC.

# fumarate hydratase (S-18): sc-27994

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Fumarate hydratase, a ubiquitously expressed mitochondrial enzyme, catalyses the reversible hydration of fumaric acid to yield l-malic acid during the Krebs cycle. Germline mutations in the fumarate hydratase gene cause a predisposition to renal defects such as multiple cutaneous and uterine leiomyoma (MCL) syndrome. Furthermore, mutations also correlate with renal and smooth muscle tumors, but not with prostate cancer. Additionally, like other metabolic diseases, fumarate hydratase deficiency correlates with seizures, due to prenatal brain dysgenesis.

## CHROMOSOMAL LOCATION

Genetic locus: FH (human) mapping to 1q43; Fh1 (mouse) mapping to 1 H4.

## SOURCE

fumarate hydratase (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of fumarate hydratase of human origin.

## 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-27994 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

fumarate hydratase (S-18) is recommended for detection of precursor mitochondrial and cytoplasmic mature chains of fumarate hydratase 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).

fumarate hydratase (S-18) is also recommended for detection of precursor mitochondrial and cytoplasmic mature chains of fumarate hydratase in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for fumarate hydratase siRNA (h): sc-105377, fumarate hydratase siRNA (m): sc-145272, fumarate hydratase shRNA Plasmid (h): sc-105377-SH, fumarate hydratase shRNA Plasmid (m): sc-145272-SH, fumarate hydratase shRNA (h) Lentiviral Particles: sc-105377-V and fumarate hydratase shRNA (m) Lentiviral Particles: sc-145272-V.

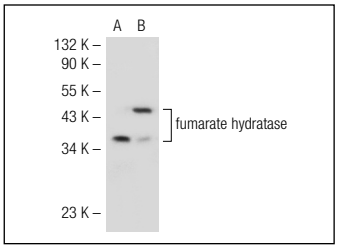
Molecular Weight of fumarate hydratase: 46 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or fumarate hydratase (m): 293T Lysate: sc-120338.

## 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




fumarate hydratase (S-18): sc-27994. Western blot analysis of fumarate hydratase expression in non-transfected: sc-117752 (**A**) and mouse fumarate hydratase transfected: sc-120338 (**B**) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **fumarate hydratase (H-6): sc-393992** or **fumarate hydratase (J-13): sc-100743**, our highly recommended monoclonal alternatives to fumarate hydratase (S-18).