**BACKGROUND**

MUTYH (mutY homolog \((E. coli)\)) is a DNA glycosylase mismatch repair enzyme that in conjunction with mutM \((OG11)\), cleaves adenine residues paired with either oxidized (8-hydroxyguanines) or non-modified guanines in order to correct A/G and A/C mismatches. Repair of most modified and mispaired bases in the genome is initiated by DNA glycosylases, which bind and cleave N-glycosyl bonds to initiate base excision repair. MUTYH is crucial for the avoidance of mutations resulting from oxidative DNA damage. Multiple N-terminal splice variants of MUTYH exist in mammalian cells. Increasing levels of MUTYH in A549 cells exposed to oxygen and infrared radiation leads to improvements in cell survival. Biallelic MUTYH germ-line mutations predispose humans to colorectal adenomas and carcinomas. MUTYH is abundant in neurons where mitochondrial genomes exposed to reactive oxygen species (ROS) that damage DNA must maintain integrity over the entire mammalian life span.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: MUTYH (human) mapping to 1p34.1; Mutyh (mouse) mapping to 4 D1.

**SOURCE**

MUTYH (C-6) is a mouse monoclonal antibody raised against amino acids 182-225 mapping within an internal region of MUTYH of human origin.

**PRODUCT**

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

**STORAGE**

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

**APPLICATIONS**

MUTYH (C-6) is recommended for detection of MUTYH 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MUTYH siRNA (h): sc-37407, MUTYH siRNA (m): sc-45816, MUTYH shRNA Plasmid (h): sc-37407-SH, MUTYH shRNA Plasmid (m): sc-45816-SH, MUTYH shRNA (h) Lentiviral Particles: sc-37407-V and MUTYH shRNA (m) Lentiviral Particles: sc-45816-V.

Molecular Weight of MUTYH: 65 kDa.

Positive Controls: C3H/10T1/2 cell lysate: sc-3801, NIH/3T3 whole cell lysate: sc-2210 or 3T3-L1 cell lysate: sc-2243.

**DATA**

![Western blot analysis of MUTYH expression in ES-D3 (A), NIH/3T3 (B) and NIH 3T3 (C) whole cell lysates.](image1)

MUTYH (C-6): sc-374571. Western blot analysis of MUTYH expression in ES-D3 (A), C3H/10T1/2 (B) and NIH 3T3 (C) whole cell lysates.

**SELECT PRODUCT CITATIONS**


**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.