BACKGROUND

HPRT (hypoxanthine phosphoribosyltransferase 1), also known as HGPRT or HPRT1, is a 218 amino acid cytoplasmic protein that belongs to the purine/pyrimidine phosphoribosyltransferase family. Involved in purine metabolism, HPRT functions as a purine salvage enzyme that catalyzes the conversion of hypoxanthine and guanine to their respective mononucleotides (inosine monophosphate and guanosine monophosphate, respectively). HPRT exists as a homotetramer that can bind two magnesium ions as cofactors. Defects in the gene encoding HPRT are the cause of gout and Lesch-Nyhan syndrome (LNS), both of which are characterized by a partial or complete lack of NPRT enzymatic activity. While a partial loss of HPRT enzymatic activity results in a buildup of uric acid (gout), a total loss of enzymatic activity results in hyperuricaemia, mental retardation, choreoathetosis and compulsive self-mutilation, all of which are symptoms associated with LNS. The severity of these diseases suggests an essential role for HPRT in purine metabolism.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: HPRT1 (human) mapping to Xq26.2; Hprt (mouse) mapping to X A5.

SOURCE

HPRT (A-10) is a mouse monoclonal antibody raised against amino acids 1-218 representing full length HPRT 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.

STORAGE

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

APPLICATIONS

HPRT (A-10) is recommended for detection of HPRT 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 HPRT siRNA (h): sc-40679, HPRT siRNA (m): sc-40680, HPRT shRNA Plasmid (h): sc-40679-SH, HPRT shRNA Plasmid (m): sc-40680-SH, HPRT shRNA (h) Lentiviral Particles: sc-40679-V and HPRT shRNA (m) Lentiviral Particles: sc-40680-V.

Molecular Weight of HPRT: 23 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

RECOMMENDED SUPPORT REAGENTS

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

DATA

HPRT (A-10): sc-376559. Western blot analysis of HPRT expression in Hep G2 (A), HeLa (B), A-431 (C) and MCF7 (D) whole cell lysates.

SELECT PRODUCT CITATIONS


RESEARCH USE

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