

# Mpi (N-15): sc-161877

## BACKGROUND

Mpi (mannose phosphate isomerase), also known as PMI (phosphomannose isomerase) or PMI1, is a 423 amino acid zinc metalloenzyme belonging to the mannose-6-phosphate isomerase type 1 family, and is expressed in all tissues, more abundantly in heart, brain and skeletal muscle. A steady supply of D-mannose derivatives, which are required for most glycosylation reactions, is maintained by Mpi. Localized to the cytoplasm, Mpi utilizes zinc as a cofactor and catalyzes the interconversion of fructose-6-phosphate and mannose-6-phosphate. Mutations in the gene encoding Mpi lead to congenital disorder of glycosylation type 1B (CDG1B), also designated carbohydrate-deficient glycoprotein syndrome type 1b (CDGS1B), which is characterized by protein-losing enteropathy. Congenital disorders of glycosylation are metabolic deficiencies in glycoprotein biosynthesis that usually results in severe mental and psychomotor retardation.

## CHROMOSOMAL LOCATION

Genetic locus: MPI (human) mapping to 15q24.1; Mpi (mouse) mapping to 9 B.

## SOURCE

Mpi (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Mpi 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-161877 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

Mpi (N-15) is recommended for detection of Mpi 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).

Mpi (N-15) is also recommended for detection of Mpi in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Mpi siRNA (h): sc-90211, Mpi siRNA (m): sc-149531, Mpi shRNA Plasmid (h): sc-90211-SH, Mpi shRNA Plasmid (m): sc-149531-SH, Mpi shRNA (h) Lentiviral Particles: sc-90211-V and Mpi shRNA (m) Lentiviral Particles: sc-149531-V.

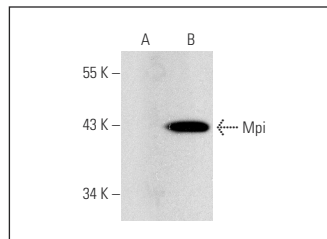
Molecular Weight of Mpi: 47 kDa.

Positive Controls: Mpi (h): 293T Lysate: sc-115944 or rat brain extract: sc-2392.

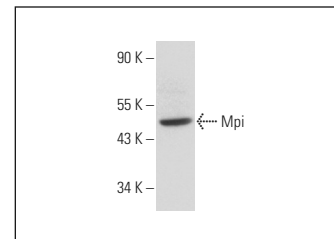
## RECOMMENDED SECONDARY REAGENTS

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



Mpi (N-15): sc-161877. Western blot analysis of Mpi expression in non-transfected: sc-117752 (A) and human Mpi transfected: sc-115944 (B) 293T whole cell lysates.



Mpi (N-15): sc-161877. Western blot analysis of Mpi expression in rat brain tissue extract.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Mpi (B-2): sc-393484** or **Mpi (E-4): sc-393477**, our highly recommended monoclonal alternatives to Mpi (N-15).