

# HCP1 (M-15): sc-54207

## BACKGROUND

HCP1 (heme carrier protein 1), also known as proton-coupled folate transporter (PCFT), is a multi-pass transmembrane protein that is expressed in the small intestine. It is predominantly found in the duodenum and the jejunum localizing to the apical brush border. HCP1 is required for normal folate absorption in the intestine and is associated with folate homeostasis. HCP1 mediates the transport of folate and functions most optimally at a low extracellular pH of approximately 5.5. HCP1 functions independently of Na<sup>+</sup> and is insensitive to membrane potential. It exhibits high affinity for folic acid and low affinity for the PT523 antifolate. HCP1 is posttranslationally regulated by iron levels in the duodenum. During iron deficiency, HCP1 localizes to the apical membrane; however, iron excess causes HCP1 to localize in the cytoplasm. Sulfasalazine is a potent inhibitor of HCP1. Mutations in the gene encoding HCP1 can result in the autosomal recessive disorder hereditary folate malabsorption (HFM).

## CHROMOSOMAL LOCATION

Genetic locus: SLC46A1 (human) mapping to 17p11.1; Slc46a1 (mouse) mapping to 11 B5.

## SOURCE

HCP1 (M-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HCP1 of mouse 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-54207 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

HCP1 (M-15) is recommended for detection of heme carrier protein 1 of mouse, rat and, to a lesser extent, 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).

HCP1 (M-15) is also recommended for detection of heme carrier protein 1 in additional species, including equine and canine equine and canine.

Suitable for use as control antibody for HCP1 siRNA (h): sc-72314, HCP1 siRNA (m): sc-72315, HCP1 shRNA Plasmid (h): sc-72314-SH, HCP1 shRNA Plasmid (m): sc-72315-SH, HCP1 shRNA (h) Lentiviral Particles: sc-72314-V and HCP1 shRNA (m) Lentiviral Particles: sc-72315-V.

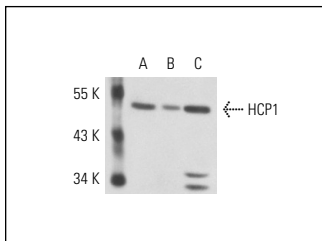
Molecular Weight of HCP1: 54 kDa.

Positive Controls: 804G whole cell lysate, NIH/3T3 whole cell lysate: sc-2210 or MDCK cell lysate: sc-2252.

## 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



HCP1 (M-15): sc-54207. Western blot analysis of HCP1 expression in 804G (A), NIH/3T3 (B) and MDCK (C) whole cell lysates.

## STORAGE

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

## PROTOCOLS

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

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Try **HCP1 (B-4): sc-393460**, our highly recommended monoclonal alternative to HCP1 (M-15).