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HCP1 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55987

Specification

HCP1 Polyclonal Antibody - Product Information

Application	**IHC-P, WB**
Primary Accession	Q96NT5
Reactivity	**Rat, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**49771**

HCP1 Polyclonal Antibody - Additional Information

Gene ID 113235

Other Names
Proton-coupled folate transporter, G21, Heme carrier protein 1, PCFT/HCP1, Solute carrier family 46 member 1, SLC46A1, HCP1, PCFT

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

HCP1 Polyclonal Antibody - Protein Information

Name SLC46A1 {ECO:0000303|PubMed:20686069, ECO:0000312|HGNC:HGNC:30521}

Function
Proton-coupled folate symporter that mediates folate absorption using an H(+) gradient as a driving force (PubMed:17129779, PubMed:17446347, PubMed:17475902, PubMed:19389703, PubMed:19762432, PubMed:25504888, PubMed:30858177, PubMed:31792273, PubMed:34619546, PubMed:29344585, PubMed:31494288, PubMed:32893190). Involved in the intestinal absorption of folates at the brush-border membrane of the proximal jejunum, and the transport from blood to cerebrospinal

fluid across the choroid plexus (PubMed:17129779, PubMed:17446347, PubMed:17475902, PubMed:19389703, PubMed:25504888, PubMed:30858177, PubMed:29344585, PubMed:31494288, PubMed:32893190). Functions at acidic pH via alternate outward- and inward-open conformation states (PubMed:34040256, PubMed:32893190). Protonation of residues in the outward open state primes the protein for transport (PubMed:34040256). Binding of folate promotes breaking of salt bridge network and subsequent closure of the extracellular gate, leading to the inward- open state and release of protons and folate (PubMed:34040256). Also able to transport antifolate drugs, such as methotrexate and pemetrexed, which are established treatments for cancer and autoimmune diseases (PubMed:18524888, PubMed:19762432, PubMed:25608532, PubMed:28802835, PubMed:29326243, PubMed:34619546, PubMed:34040256, PubMed:22345511). Involved in FOLR1-mediated endocytosis by serving as a route of export of folates from acidified endosomes (PubMed:19074442). Also acts as a lower-affinity, pH-independent heme carrier protein and constitutes the main importer of heme in the intestine (PubMed:17156779). Imports heme in the retina and retinal pigment epithelium, in neurons of the hippocampus, in hepatocytes and in the renal epithelial cells (PubMed:32621820). Hence, participates in the trafficking of heme and increases intracellular iron content (PubMed:32621820).

Cellular Location
Cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein. Endosome membrane; Multi-pass membrane protein. Cytoplasm {ECO:0000250|UniProtKB:Q6PEM8}. Note=Localizes to the apical membrane of intestinal cells in iron-deficient cells, while it resides in the cytoplasm in iron-replete cells (By similarity). Localizes to the basolateral membrane of choroid plexus (PubMed:19074442) {ECO:0000250|UniProtKB:Q6PEM8, ECO:0000269|PubMed:19074442}

Tissue Location
Expressed at highest level in the upper half of the small intestine (duodenum and jejunum), expression decreases downwardly in the subsequent quarter and is undetectable in the last quarter (the lowest ileum) (PubMed:17129779, PubMed:19762432). Also expressed in kidney, liver, placenta, spleen, retina and retinal pigment epithelium (PubMed:17129779, PubMed:17335806). Lower levels found in testis (PubMed:17129779). Very low levels in brain, lung, stomach, heart and muscle (PubMed:17129779).

HCP1 Polyclonal Antibody - Protocols

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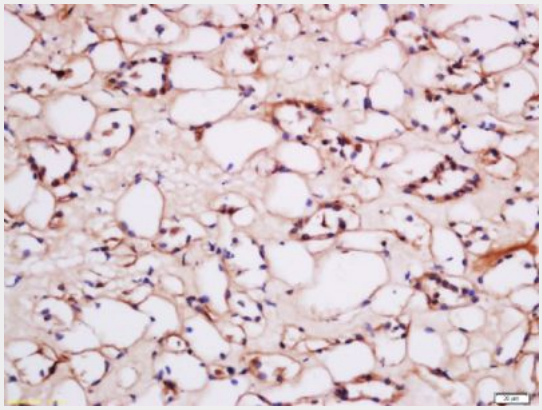
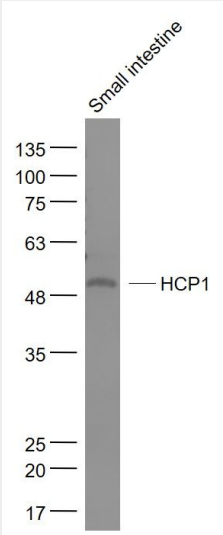
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HCP1 Polyclonal Antibody - Images



Tissue/cell: human kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-HCP1 Polyclonal Antibody, Unconjugated(bs-15428R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Sample:
Small intestine (Mouse) Lysate at 40 ug
Primary: Anti- HCP1 (bs-15428R) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

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Predicted band size: 50 kD
Observed band size: 50 kD