# HCP1/PCFT Rabbit pAb

CatalogNo: YN8792

## Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB

MW
- 50kD (Calculated)

Isotype
- IgG

## Recommended Dilution Ratios

**WB 1:500-2000**

## Storage

| | |
|---|---|
| **Storage*** | -15°C to -25°C/1 year(Do not lower than -25°C) |
| **Formulation** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide. |

## Basic Information

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|---|---|
| **Clonality** | Polyclonal |

## Immunogen Information

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|---|---|
| **Immunogen** | Synthesized peptide derived from human HCP1/PCFT |
| **Specificity** | This antibody detects endogenous levels of HCP1/PCFT at Human, Mouse,Rat |

## Target Information

| | |
|---|---|
| **Gene name** | SLC46A1 HCP1 PCFT |

**Protein Name** Proton-coupled folate transporter (G21) (Heme carrier protein 1) (PCFT/HCP1) (Solute carrier family 46 member 1)

| Organism | Gene ID | UniProt ID |
|---|---|---|
| Human | 113235; | Q96NT5; |
| Mouse | 52466; | Q6PEM8; |
| Rat | 303333; | Q5EBA8; |

**Cellular Localization** 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 . 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). .

**Tissue specificity** 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).

**Function** Proton-coupled folate transporter that mediates folate absorption using an H(+) gradient as a driving force . Catalyzes 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 . Functions at acidic pH via alternate outward- and inward-open conformation states . Protonation of residues in the outward open state primes the protein for transport . 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 . Also able to transport antifolate drugs, such as methotrexate and pemetrexed, which are established treatments for cancer and autoimmune diseases . Involved in FOLR1-mediated endocytosis by serving as a route of export of folates from acidified endosomes . Also acts as a lower-affinity, pH-independent heme carrier protein and constitutes the main importer of heme in the intestine . Imports also heme in the retina and retinal pigment epithelium, in neurons of the hippocampus, in hepatocytes and in the renal epithelial cells . Participates therefore in the trafficking of heme and increases intracellular iron content . ; [Isoform 2]: Inactive isoform which is not able to mediate proton-coupled folate transport.

## Validation Data

## Contact information


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