

SLC46A1 / PCFT (aa233-247) Antibody (internal region)
Peptide-affinity purified goat antibody
Catalog # AF3552a**Specification**

SLC46A1 / PCFT (aa233-247) Antibody (internal region) - Product Information

Application	WB, E
Primary Accession	O96NT5
Other Accession	NP_542400.2 , 113235
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	49771

SLC46A1 / PCFT (aa233-247) Antibody (internal region) - 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

Dilution

WB~~1:1000

E~~N/A

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

SLC46A1 / PCFT (aa233-247) Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

SLC46A1 / PCFT (aa233-247) Antibody (internal region) - 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)

target="_blank">17446347, PubMed:17475902, PubMed:19389703, PubMed:19762432, PubMed:25504888, PubMed:29344585, PubMed:30858177, PubMed:31494288, PubMed:31792273, PubMed:32893190, PubMed:34619546). 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:29344585, PubMed:30858177, PubMed:31494288, PubMed:32893190). Functions at acidic pH via alternate outward- and inward-open conformation states (PubMed:32893190, PubMed:34040256). 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:22345511, PubMed:25608532, PubMed:28802835, PubMed:29326243, PubMed:34040256, PubMed:34619546). 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).

SLC46A1 / PCFT (aa233-247) Antibody (internal region) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SLC46A1 / PCFT (aa233-247) Antibody (internal region) - Images

AF3552a (0.3 µg/ml) staining of Human Liver lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

SLC46A1 / PCFT (aa233-247) Antibody (internal region) - References

Functional roles of aspartate residues of the proton-coupled folate transporter (PCFT SLC46A1); a D156Y mutation causing hereditary folate malabsorption. Shin DS, Min SH, Russell L, Zhao R, Fiser A, Goldman ID. Blood. 2010 Dec 9;116(24):5162-9. PMID: 20805364