abcam

ab203043

Anti-SLC15A1/PEPT1 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 48.98% TBS, 1X, 1% BSA
Form	Liquid
Clonality	Polyclonal
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/20 - 1/100
Notes	-

Predicted

Species	Cow, Mouse, Rat, Chicken
Dilution info	-

Notes	-

WB

Not recommended

Species	Mouse, Rat, Chicken, Human, Cow
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/500
Notes	-

Predicted

Species	Cow, Mouse, Rat, Chicken
Dilution info	-
Notes	-

ICC/IF

Expected

Species	Mouse, Rat, Chicken, Human, Cow
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information SLC15A1

Function	Electrogenic proton-coupled amino-acid transporter that transports oligopeptides of 2 to 4 amino acids with a preference for dipeptides. Transports neutral and

monovalently charged peptides with a proton to peptide stoichiometry of 1:1 or 2:1 (By similarity) (PubMed:15521010, PubMed:18367661, PubMed:19685173, PubMed:26320580, PubMed:7896779, PubMed:8914574, PubMed:9835627). Primarily responsible for the absorption of dietary di- and tripeptides from the small intestinal lumen (By similarity). Mediates transepithelial transport of muramyl and N-formylated bacterial dipeptides contributing to recognition of pathogenic bacteria by the mucosal immune system (PubMed:15521010, PubMed:9835627).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	SLC15A1 also known as PEPT1 is a protein that functions as a proton-coupled oligopeptide transporter. It facilitates the uptake of di- and tripeptides from the intestinal lumen which is essential for nutrient absorption and peptide-based drug delivery. The molecular weight of PEPT1 is approximately 78 kDa. The expression of PEPT1 is mainly in the brush border membrane of small intestine epithelial cells playing a significant role in the digestive system's initial phase of protein digestion.
Biological function summary	PEPT1 mediates the cellular uptake of nutrient peptides and peptidomimetic drugs. PEPT1 functions as a transporter that is not part of a larger protein complex but interacts closely with various solute carrier proteins. Its activity helps regulate amino acid availability within the intestinal cells influencing local metabolic pathways and systemic amino acid levels.

Pathways	PEPT1 is integrally involved in the protein digestion and absorption pathway influencing the systemic availability of dietary peptides and drugs. This protein also connects with other transporters such as SLC15A2 (PEPT2) in related pathways to manage di- and tripeptide absorption and reabsorption. Together these transporters ensure efficient nutrient acquisition and influence pharmacokinetics for orally administered peptide-based medications.
Associated diseases and disorders	Dysregulation of PEPT1 expression or function associates with conditions such as inflammatory bowel disease (IBD) and malabsorption syndromes. Variants in the SLC15A1 gene might affect PEPT1 altering its transport efficiency and contributing to these gastrointestinal disorders. Additionally changes in PEPT1 activity could influence the bioavailability of peptide-based drugs affecting therapeutic outcomes for diseases requiring such treatments.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

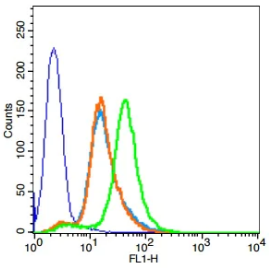
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

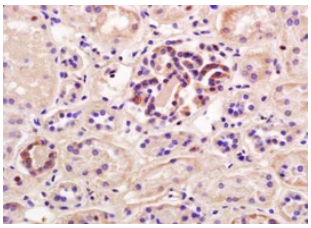
2 product images



Flow Cytometry - Anti-SLC15A1/PEPT1 antibody (ab203043)

SLC15A1/PEPT1 Flow Cytometry staining using rabbit Anti-SLC15A1/PEPT1 antibody

Flow cytometry analysis of HCCLM3 cells labelling SLC15A1/PEPT1 (green) with ab203043 at dilution of 1/100 followed by incubation with a conjugated secondary antibody. The controls are as follows, control cells (blue), secondary only (light blue) and isotype control (orange).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SLC15A1/PEPT1 antibody (ab203043)

SLC15A1/PEPT1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SLC15A1/PEPT1 antibody

Immunohistochemical analysis of formalin-fixed and paraffin embedded human kidney tissue sections labeling SLC15A1/PEPT1 with ab203043 at 1/200 followed by conjugation to the secondary antibody and DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.