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ENT1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1086b

Product Information

Application	WB, FC, IHC-P-Leica, E
Primary Accession	Q99808
Other Accession	O54698, Q9JIM1
Reactivity	Human, Mouse, Rat
Predicted	Mouse, Rat, Rabbit, Chicken, Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	50219
Antigen Region	402-431

Additional Information

Gene ID	2030
Other Names	Equilibrative nucleoside transporter 1, Equilibrative nitrobenzylmercaptopurine riboside-sensitive nucleoside transporter, Equilibrative NBMPR-sensitive nucleoside transporter, Nucleoside transporter, es-type, Solute carrier family 29 member 1, SLC29A1, ENT1
Target/Specificity	This ENT1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 402-431 amino acids from the C-terminal region of human ENT1.
Dilution	WB~~1:1000 FC~~1:25 IHC-P-Leica~~1:500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ENT1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC29A1 (HGNC:11003)

Synonyms	ENT1
Function	Uniporter involved in the facilitative transport of nucleosides and nucleobases, and contributes to maintaining their cellular homeostasis (PubMed:10722669, PubMed:10755314, PubMed:12527552, PubMed:14759222, PubMed:15037197, PubMed:17379602, PubMed:21795683, PubMed:26406980, PubMed:27995448, PubMed:35790189, PubMed:8986748). Functions as a Na(+)-independent transporter (PubMed:8986748). Involved in the transport of nucleosides such as adenosine, guanosine, inosine, uridine, thymidine and cytidine (PubMed:10722669, PubMed:10755314, PubMed:12527552, PubMed:14759222, PubMed:15037197, PubMed:17379602, PubMed:26406980, PubMed:8986748, PubMed:39737929). Also transports purine nucleobases (hypoxanthine, adenine, guanine) and pyrimidine nucleobases (thymine, uracil) (PubMed:21795683, PubMed:27995448). Also mediates the uptake of nicotinamide; contributes to maintaining nicotinamide homeostasis but also regulated nicotinamide biological roles (PubMed:39885119). Mediates basolateral nucleoside uptake into Sertoli cells, thereby regulating the transport of nucleosides in testis across the blood-testis barrier (By similarity). Regulates inosine levels in brown adipocytes tissues (BAT) and extracellular inosine levels, which controls BAT-dependent energy expenditure (PubMed:35790189).
Cellular Location	Basolateral cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Note=Localized to the basolateral membrane of Sertoli cells (PubMed:23639800). Localized to the cell membrane of erythrocytes (PubMed:11584005, PubMed:23219802).
Tissue Location	Expressed in testis at the blood-testis barrier (at protein level) (PubMed:23639800). Detected in erythrocytes (at protein level) (PubMed:11584005, PubMed:23219802). Expressed at relatively high levels in cerebral cortex, particularly the frontal and parietal lobes, and the thalamus and basal ganglia (at protein level) (PubMed:11311901). In the midbrain expressed at moderate levels, whereas in the other areas of the brainstem, namely medulla and pons, cerebellum and the hippocampus expressed at lower amounts when compared to the other brain regions (at protein level) (PubMed:11311901) Expressed in Langerhans cells and lymphocytes in the pancreas (at protein level) (PubMed:15501974). Expressed in kidney, in polarized renal epithelial cells (PubMed:12527552). Expressed in adipose tissues (PubMed:35790189). Expressed in placenta (PubMed:8986748). Expressed in small intestine (PubMed:10755314).

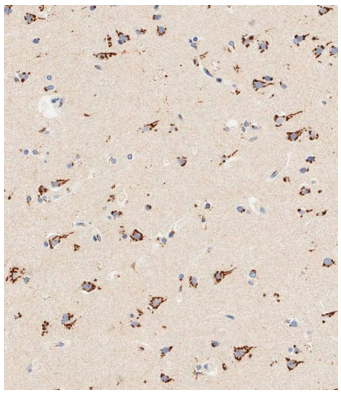
Background

ENT1 is a member of the equilibrative nucleoside transporter family. It is a transmembrane glycoprotein that localizes to the plasma and mitochondrial membranes and mediates the cellular uptake of nucleosides from the surrounding medium. The protein is categorized as an equilibrative (as opposed to concentrative) transporter that is sensitive to inhibition by nitrobenzylthioinosine (NBMPR). Nucleoside transporters are required for nucleotide synthesis in cells that lack de novo nucleoside synthesis pathways, and are also necessary for the uptake of cytotoxic nucleosides used for cancer and viral chemotherapies.

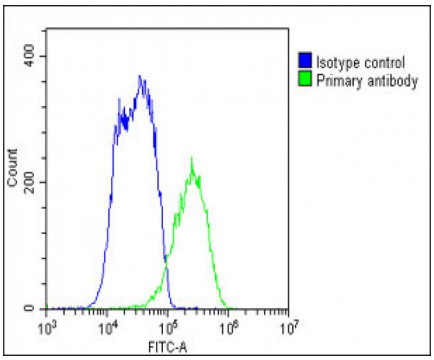
References

Bone,D.B.,Am. J. Physiol. Heart Circ. Physiol. 293 (6), H3325-H3332 (2007) Damaraju,V.L., Am. J. Physiol. Renal Physiol. 293 (1), F200-F211 (2007) Abdulla,P.,Nucleosides Nucleotides Nucleic Acids 26 (1), 99-110 (2007) Sundaram,M., J. Biol. Chem. 276 (48), 45270-45275 (2001)

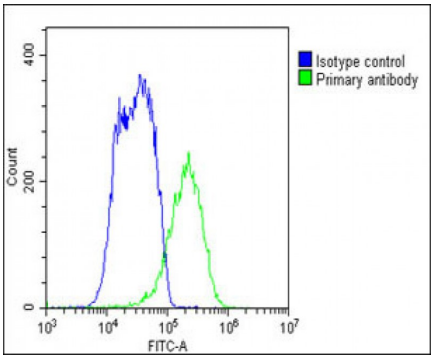
Images



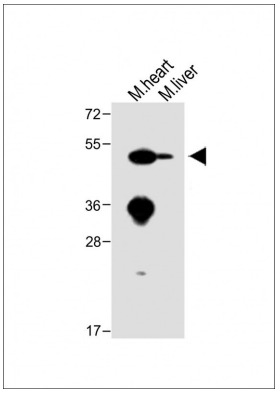
Immunohistochemical analysis of paraffin-embedded human brain tissue using AP1086b performed on the Leica® BOND RXm. Samples were incubated with primary antibody(1/500) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



Overlay histogram showing HepG2 cells stained with AP1086B(green line). The cells were fixed with 2% paraformaldehyde 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP1086B, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

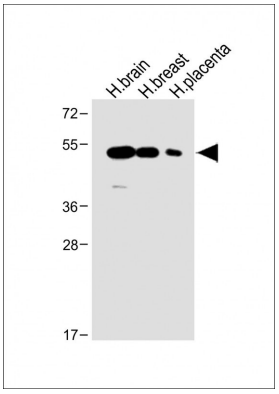


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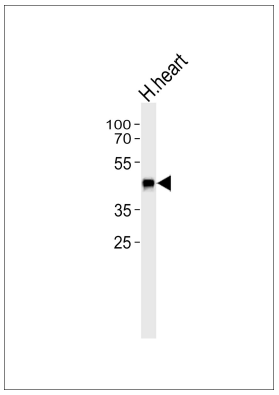


All lanes : Anti-ENT1 Antibody (C-term) at 1:1000 dilution Lane 1: Mouse heart lysate Lane 2: Mouse liver lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 50 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

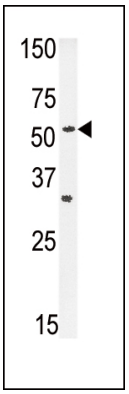
All lanes : Anti-ENT1 Antibody (C-term) at 1:1000 dilution Lane 1: Human brain lysate Lane 2: Human breast lysate Lane 3: Human placenta lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),



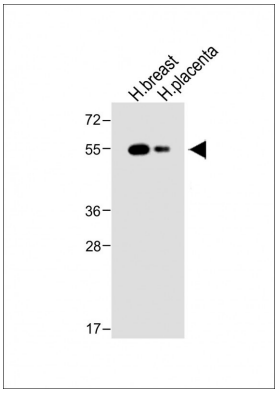
Peroxidase conjugated at 1/10000 dilution. Predicted band size : 50 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of lysate from human heart tissue lysate, using ENT1(Slc29a1) Antibody (C-term)(Cat. #AP1086B). AP1086B was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.

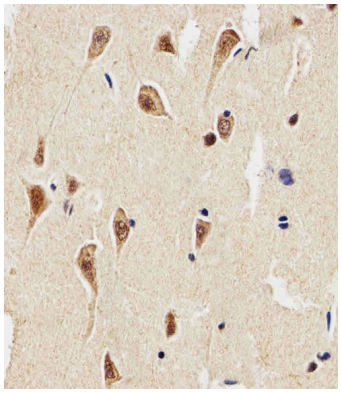


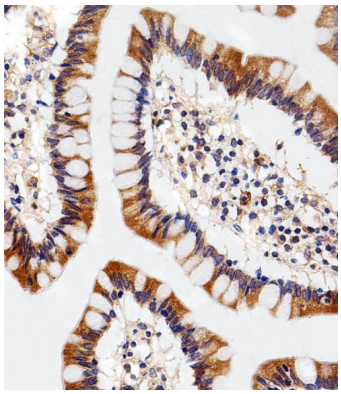
Western blot analysis of ENT1 Antibody (C-term) (Cat. #AP1086b) in mouse heart tissue lysates (35ug/lane). ENT1 (arrow) was detected using the purified Pab.



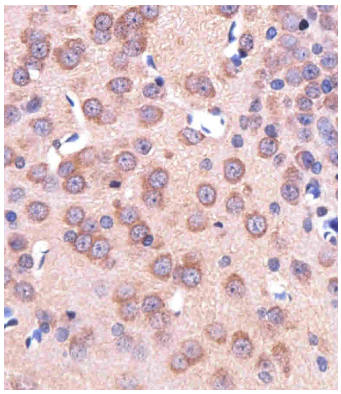
All lanes : Anti-ENT1 Antibody (C-term) at 1:1000 dilution Lane 1: Human breast lysate Lane 2: Human placenta lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 50 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Immunohistochemical analysis of paraffin-embedded H. brain section using ENT1(Slc29a1) (C-term)(Cat#AP1086B). AP1086B was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.





Immunohistochemical analysis of paraffin-embedded H. colon section using ENT1(Slc29a1) (C-term)(Cat#AP1086B). AP1086B was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Immunohistochemical analysis of paraffin-embedded R. brain section using ENT1(Slc29a1) (C-term)(Cat#AP1086B). AP1086B was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

Citations

- Enhancing Extracellular Adenosine Levels Restores Barrier Function in Acute Lung Injury Through Expression of Focal Adhesion Proteins
- Reduced ribavirin antiviral efficacy via nucleoside transporter-mediated drug resistance.
- Host-based ribavirin resistance influences hepatitis C virus replication and treatment response.
- Equilibrative nucleoside transporter 1 (ENT1) regulates postischemic blood flow during acute kidney injury in mice.

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