



Code No. KAL-KE028-EX

For research use only

Anti Rat 4F2 Heavy Chain (4F2hc:CD98) Polyclonal Antibody, Rabbit

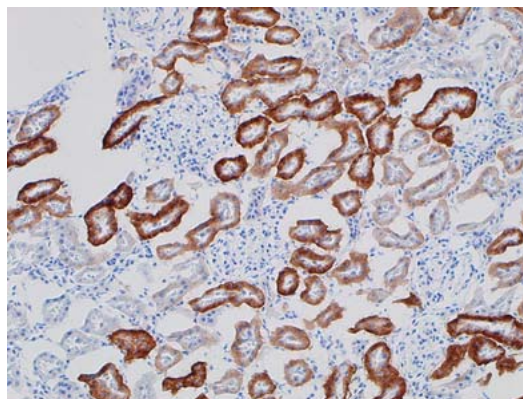
Mammalian amino acid transport system is consisted of large variety of transporters, with the reflection of amino acid molecule variety, and is classified into various transport systems by the transportative substrate selectivity and the Na^+ dependence with the reflection of amino acid molecule variety.

4F2 heavy chain (4F2hc:CD98) is originally identified as a cell-surface antigen which is upregulated by lymphocyte activation, and is a single membrane-spanning protein, of which molecular weight is under 85-kDa. The transporter corresponds to the amino acid transporter, system L, y^+L , X_c^- , and asc, which requires 4F2hc for its functional expression. 4F2hc and its associated transporters are linked via disulfide band to form heterodimeric complexes. 4F2hc is present at cell membrane in blood vessel side of epitheliocyte, and transports its associated transporters to cell membrane of blood vessel in epitheliocyte.

This antibody has been proved to be useful for immunohistochemistry and immunoblotting.

Considering the peptide amino acid sequence, this antibody also seems to react with mouse 4F2hc.

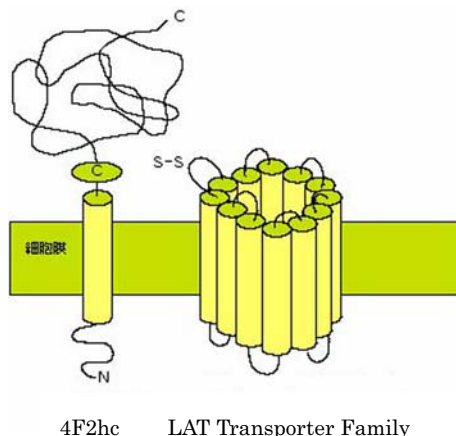
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| Package Size | 25 μg (250 μL / vial) |
| Format | Rabbit polyclonal antibody 0.1mg/ml |
| Buffer | Block Ace as a stabilizer, containing 0.1%Proclin as bacteriostat |
| Storage | Store below -20°C Once thawed, store at 4°C . Repeated freeze-thaw cycles should be avoided. |
| Purification method | This antibody was purified from rabbit serum immunized with synthesized peptide of C- end of rat 4F2hc by peptide affinity chromatography. |
| Working dilution ,for imunohistochemistry: | 5-10 $\mu\text{g}/\text{mL}$, for immunoblotting: 0.1-1 $\mu\text{g}/\text{mL}$ |
| : | |



Rat Kidney (frozen section)



Anti Rat 4F2 Heavy Chain (4F2hc:CD98) Polyclonal Antibody, Rabbit



Heterodimeric Complex

【Reference】

1. Kanai Y., Segawa H., Miyamoto M., Uchino H., Takeda E., and Endou H.: Expression Characterization of a Transporter for Large Neutral Amino Acids Activated by the Heavy Chain of 4F2 Antigen (CD98) *J.Biol.Chem.* 273: 23629-23632, 1998
2. Segawa H., Fasawa Y., Miyamoto K., Takeda E., Endou H., and Kanai Y.: Identification and functional characterization of a Na⁺-independent neutral amino acid transporter with broad substrate selectivity. *J.Biol.Chem.* 274 (28):19745-19751, 1999
3. Fukasawa Y., Segawa H., Kim J.Y., Chairoungdua A., Kim D.K., Endou h., and Kanai Y.: Identification and characterization of a Na⁺-independent neutral amino acid transporter which associates with the 4F2heavy chain and exhibits selectivity for small neutral D- and L- amino acids. *J.Biol.Chem.* 275(13): 9690-9698,2000
4. Kanai Y., Fukasawa Y., Cha S.H., Segawa H., Chairoungdua A., Kim D.Y., Matsuo H.,KimJ.Y., Miyamoto K., Takeda E., and Endou H.: Transport properties of a system y⁺L neutral and basic amino acid transporter. *J.Biol.Chem.* 275(27): 20787-20793, 2000
5. Kim J.Y., Kanai Y., Chairoungdua A., Cha S.H., Matsuo H., kim D.K., Inatomi J., Sawa H., Ida Y., Endou H.:Human cystine/glutamate transporter: cDNA cloning and upregulation by oxidative stress in glioma cells. *Biochim. Biophys.Acta.*1512: 335-344,2001.
6. Yanagawa O., Kanai Y., Chairoungdua A., Kim D.K., Segawa H., Nii T., Cha S.H., Matsuo H., Fukushima J., Fukusawa Y., Tani Y., Taketani Y., Uchino H., Kim J.Y., Inatomi J., Okayasu I., Miyamoto K., Takeda E., Goya T., and Endou H.:Human L-type amino acid transporter 1 (LAT1): Characterization of function and expression in tumor cell lines. *Biochim.Biophys.Acta.*1514: 291-302,2001

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