Code No.KE020



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## Anti Human 4F2 Heavy Chain (4F2hc:CD98) Polyclonal Antibody

Mammalian amino acid transport system is consisted of large variety of transporters with the reflection of amino acid molecule variety, and is classfied 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 memblane-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 epitherliocyte, and transports its associated transporters to cell membrane of blood vessel in epitherliocyte.

This antidody has been proved to be useful for immunohistochemistry.

Package Size	$250 \mu\mathrm{g}$ (500 $\mu\mathrm{L}/\mathrm{vial}$ )
Format	Rabbit polyclonal antibody 0.5mg/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 human 4F2hc by protein G affinity chromatography.
Working dilution for in	mmunohistochemistry: $50 \mu$ g/mL

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Heterodimetric Complex

## [Reference]

- 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
- Fukasawa Y., Segawa H., Kim J.Y., Chairoungdua A., Kim D.K., Endou h., and Kanai Y.: Identification and characterization of a Na<sup>+</sup>-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
- 3. Matsuo H., Tsukada S., Nakata T., ChairoungduaA., Kim D. K., Cha S. H., Inatomi J., Yorifuji H., Fukuda J., Endou H., Kanai., *Neuroreport* 11 (16),3507-3511,2000
- 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 glinoma cells. *Biochim. Biophys.Acta*.1512: 335-344,2001.
- 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

Manufacturer



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