

PRODUCT INFORMATION



SLC3A2/CD98 Heavy Chain Rabbit Monoclonal Antibody (Clone 048) Item No. 38102

Overview and Properties

Contents:	This vial contains 50 or 100 µl of protein A-affinity purified monoclonal antibody
Synonyms:	CD98, CD98hc, 4F2HC, Solute Carrier Family 3 Member 2
Immunogen:	Recombinant mouse SLC3A2
Species Reactivity:	(+) Mouse
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	048
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) (paraffin); the recommended starting dilution is 1:5,000-10,000. Other applications were not tested, therefore optimal working dilution should be determined empirically.

Description

Solute carrier family 3 member 2 (SLC3A2), also known as CD98 heavy chain (CD98hc), is a type II transmembrane glycoprotein.¹⁻⁴ It is expressed in all cell types except platelets, with the highest levels in the gastrointestinal tract and renal tubules.² SLC3A2 is composed of an extracellular domain, a single-pass transmembrane region, and a cytoplasmic domain. It heterodimerizes with various light chains, including the large neutral amino acids transporter small subunit 1 (LAT1) and LAT2, to form sodium-dependent transporters for neutral and positively charged amino acids and associates with β integrins to regulate integrin affinity and signaling, resulting in alterations in cell proliferation, adhesion, migration, and differentiation.¹ SLC3A2 is associated with tumor growth, aggressiveness, and poor prognosis in patients with biliary tract cancer.⁵ It is also expressed on low-density neutrophils (LDNs), a subset of the neutrophil population that expands in patients with autoimmune disease, and is positively correlated with disease severity in patients with systemic lupus erythematosus (SLE).⁶ Cayman's SLC3A2/CD98 Heavy Chain Rabbit Monoclonal Antibody (Clone 048) can be used for immunohistochemistry (IHC) (paraffin).

References

1. Nguyen, H.T.T. and Merlin, D. Homeostatic and innate immune responses: Role of the transmembrane glycoprotein CD98. *Cell Mol. Life Sci.* **69(18)**, 3015-3026 (2012).
2. Yan, Y., Vasudevan, S., Nguyen, H.T.T., et al. Intestinal epithelial CD98: An oligomeric and multifunctional protein. *Biochim Biophys Acta.* **1780(10)**, 1087-1092 (2008).
3. Bulus, N., Feral, C., Pozzi, A., et al. CD98 increases renal epithelial cell proliferation by activating MAPKs. *PLoS One.* **7(6)**, e40026 (2012).
4. Baumer, Y., McCurdy, S.P., Alcala, M., et al. CD98 regulates vascular smooth muscle cell proliferation in atherosclerosis. *Atherosclerosis* **256**, 105-114 (2017).
5. Kaira, K., Sunose, Y., Oriuchi, N., et al. CD98 is a promising prognostic biomarker in biliary tract cancer. *Hepatobiliary Pancreat.Dis.Int.* **13(6)**, 654-657 (02/06/23).
6. Martin, K.R., Day, J.A., Hansen, J.A., et al. CD98 defines a metabolically flexible, proinflammatory subset of low-density neutrophils in systemic lupus erythematosus. *Clin. Transl. Med.* **13(1)**, d1150 (2023).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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