

DESCRIPTION

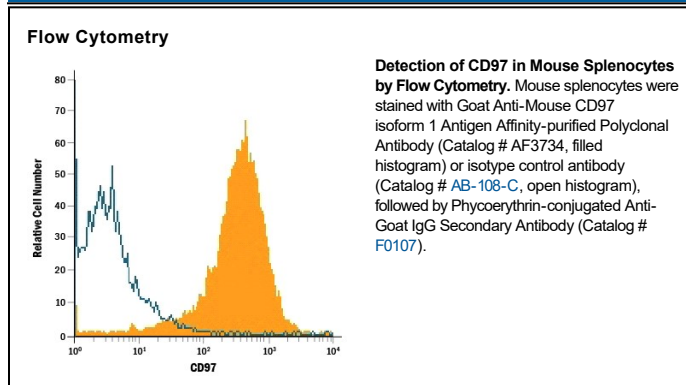
Species Reactivity	Mouse
Specificity	Detects mouse CD97 isoform 1 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant human CD97 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse CD97 isoform 1 Gln24-Arg477 Accession # Q9Z0M6
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse CD97 Variant 2 (Catalog # 5494-CD)
Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CD97 is a member of the LNB-TM7 protein family, which is a subfamily of the G-protein coupled receptor 2 family (1-3). Molecules in this family have EGF-like modules coupled to class B G protein 7-transmembrane (TM) domains by a glycosylated (mucin) stalk. Three isoforms of CD97 are produced by alternative splicing in mouse. Isoform 1, which is the longest, contains four EGF-like domains. Only the N-terminal EGF-like domain does not bind calcium. In isoform 2, which is described in this insert, does not contain this sequence that corresponds to amino acid (aa) 120-213 in isoform 1. Compared to isoform 1, isoform 3 lacks a 45 aa sequence between EGF-like domains 2 and 3 (4, 5). Cells known to express CD97 include monocytes, macrophages, T cells, select B cells, dendritic cells and, potentially, vascular and visceral smooth muscle cells (1, 6-7). CD97 is also differentially expressed on murine hematopoietic stem- and progenitor-cells (7). CD55 (decay accelerating factor), a GPI-linked cell surface molecule with short consensus repeats that regulates complement activation on cell surfaces, chondroitin sulfate and the integrin $\alpha 5\beta$ (also known as VLA-5) have been identified as cellular ligands for CD97 (7). The composition of the EGF domain region defines the ligand specificity of the different CD97 isoforms (7). The first and second EGF domains interact with CD55, whereas the fourth EGF domain binds chondroitin sulfate (7). The ligand affinity of the CD97 isoforms differs (7). While affinity for CD55 is significantly higher for the smaller isoforms, chondroitin sulfate interacts exclusively with the largest isoforms (7). It has been demonstrated that CD97 is required for neutrophil migration and host defense (8).

References:

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3. Stacey, M. *et al.* (2003) *Blood* **102**:2916.
4. Hamann, J. *et al.* (2000) *Int. Immunol.* **12**:439.
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7. Van Pel, M. *et al.* (2008) *Haematologica* **93**:1137.
8. Leemans, J.C. *et al.* (2004) *J. Immunol.* **172**:1125.