# Recombinant Mouse CD97v2

Catalog Number: 5494-CD

## DESCRIPTION

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| **Source** | Chinese Hamster Ovary cell line, CHO-derived<br>Gln24-His384, with a C-terminal 6-His tag<br>Accession # AAH06676 |
| **N-terminal Sequence Analysis** | No results obtained: Gln24 predicted |
| **Predicted Molecular Mass** | 40.6 kDa |

## SPECIFICATIONS

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| **SDS-PAGE** | 55-65 kDa, reducing conditions |
| **Activity** | Measured by its ability to bind rmCD55 in a functional ELISA.<br>When rmCD55 is immobilized at 0.5 µg/mL, 100 µL/well, the concentration of rmCD97 that produces 50% of the optimal binding response is found to be approximately 0.15-0.5 µmL. |
| **Endotoxin Level** | <1.0 EU per 1 µg of the protein by the LAL method. |
| **Purity** | >95%, by SDS-PAGE under reducing conditions and visualized by silver stain. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details. |

## PREPARATION AND STORAGE

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| **Reconstitution** | Reconstitute at 100 µg/mL in PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 3 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, chondroiten sulfate and the integrin α5β (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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