

DESCRIPTION

Source Chinese Hamster Ovary cell line, CHO-derived
Gly28-Ser160 with a C-terminal 6-His tag
Accession # AAH21596

N-terminal Sequence Analysis Gly28 & Ile30

Structure / Form Monomer

Predicted Molecular Mass 15.8 kDa

SPECIFICATIONS

SDS-PAGE 25-40 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Mouse HVEM Fc Chimera (Catalog # 2516-HV) is immobilized at 0.5 µg/mL (100 µL/well), the concentration of Recombinant Mouse CD160 that produces 50% of the optimal binding response is found to be approximately 0.012 - 0.06 µg/mL.

Endotoxin Level <0.10 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

Reconstitution Reconstitute at 250 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.**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CD160 (also Natural killer cell receptor BY55) is a 16 kDa (predicted) member of the Ig superfamily (1 - 4). In mouse, it is expressed principally on nonmyeloid hematopoietic cells. These include CD3+ NK1.1 cells, CD8+ T_{EM} and T_{CM} T cells, CD8α+ IELs, NKT cells, CD8-γδ TCR T cells, and vascular endothelial cells (1, 5 - 7). Mouse CD160 has been identified as a 20 - 21 kDa GPI-linked glycoprotein (4, 5). It is synthesized as a preproprotein that is 185 amino acids (aa) in length. The precursor contains a 27 aa signal sequence, a 133 aa mature molecule that shows one 98 aa V-type Ig-like domain (aa 28 - 125), and a 25 aa prosegment that is cleaved to generate a GPI-linkage at Ser160. Mouse GPI-linked CD160 is known to be cleaved by phospholipase C, and this generates a 40 kDa (presumably dimeric) band in SDS-PAGE (5). One alternative splice form for mouse CD160 is reported that appears to show a deletion of aa 137 - 180. This may generate a soluble molecule (5; GenBank Accession # NP_001156969). Mature mouse CD160 shares 63% and 88% aa identity with human and rat CD160, respectively.

In mouse, CD160 is reported to bind to HVEM/TNFRSF14, and both classical and non-classical MHC Class I molecules (5, 8). MHC-I proteins recognized by CD160 include Dd, Kb, Qa-1b and CD1d (5). Upon engagement, the effects of CD160 ligation appear to be context dependent. When expressed on endothelial cells, CD160 binding to human HLA-G1 initiates apoptosis, and thus impacts angiogenesis (6). When expressed on NK1.1 cells, mouse CD160 ligation alone has no effect; when combined with NK1.1 antigen stimulation, CD160 decreases NK cell IFN-γ secretion. Relative to cytotoxicity, NK cell activity is positively correlated with the presence of CD160 (5).

References:

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