Mouse CD160 Antibody

Monoclonal Rat IgG_{2A} Clone # 342705

Catalog Number: MAB38991

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CD160 in direct ELISAs.
Source	Monoclonal Rat IgG_{2A} Clone # 342705
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CD160 Gly28-Ser160 Accession # AAH21596
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 as a 0.2 μm filtered solution in PBS.

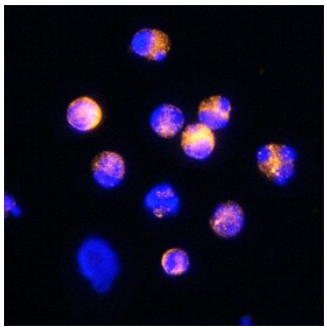
APPLICATIONS

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
Immunocytochemistry	8-25 µg/mL	See Below

DATA

Immunocytochemistry



CD160 in Mouse Splenocytes. CD160 was detected in immersion fixed $CD8^+$ mouse splenocytes using Rat Anti-Mouse CD160 Monoclonal Antibody (Catalog # MAB38991) at 25 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (yellow; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to plasma membranes and cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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.** ● 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

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, $CD8^+$ TEM and TCM T cells, $CD8\alpha^+$ 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 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 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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3. Maiza, H. *et al.* (1993) J. Exp. Med. **178**:1121.
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5. Maeda, M. *et al.* (2005) J. Immunol. **175**:4426.
6. Fons, P. *et al.* (2006) Blood **108**:2608.
7. Tsujimura, K. *et al.* (2006) Immunol. Lett. **48**:106.
8. Cheung, T.C. *et al.* (2009) Proc. Natl. Acad. Sci USA **106**:6244.