Human PVRIG Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2334B
Catalog Number: MAB93652

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human PVRIG in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2334B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Human embryonic kidney cell line HEK293-derived recombinant human PVRIG Thr41-Leu172 Accession # Q6DK17
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.

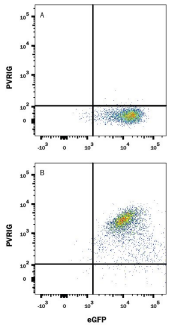
APPLICATIONS

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
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.	
Blockade of Receptor-ligand Interaction	In a functional ELISA, 40-240 Ng/mL of this antibody will block 50% of the binding of 2.5 µg/mL of Recombinant Human Nectin-2/CD112 (Catalog # 2229-N2) to immobilized Recombinant Human PVRIG Fc Chimera (Catalog # 9365-PV) coated at 1 µg/mL (100 µL/well). At 2.5 µg/mL, this antibody will block >90% of the binding.	

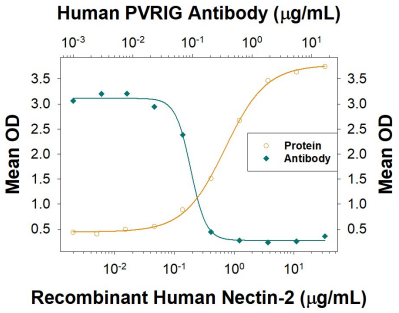
DATA

Flow Cytometry



Detection of PVRIG in HEK293 Human Cell Line Transfected with Human PVRIG and eGFP by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with either (A) human PVRIG or (B) irrelevant transfectants and eGFP was stained with Rabbit Anti-Human PVRIG Monoclonal Antibody (Catalog # MAB93652) followed by Allophycocyanin-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # F0111). Quadrant markers were set based on control antibody staining (Catalog # MAB1050). View our protocol for Staining Membrane-associated Proteins.

Blockade of Receptor-ligand Interaction



Nectin-2 Binding to PVRIG Blocked by Human PVRIG Antibody. In a functional ELISA, Recombinant Human Nectin-2/CD112 (Catalog # 2229-N2) binds to immobilized Recombinant Human PVRIG Fc Chimera (Catalog # 9365-PV) coated at 1 µg/mL (100 µL/well) in a dose-dependent manner (orange line). Binding is blocked (green line) by increasing concentrations of Rabbit Anti-Human PVRIG Monoclonal Antibody (Catalog # MAB93652). At 2.5 µg/mL, this antibody will block >90% of the binding.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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.** • 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.

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BACKGROUND

Human PVRIG (Poliovirus Receptor Related Immunoglobulin Domain-containing Protein), also known as CD112 receptor (CD112R), is an approximately 34 kDa single transmembrane protein in the poliovirus receptor-like protein (PVR) family (1). It is composed of a single extracellular IgV domain, one transmembrane domain, and a long intracellular domain. The intracellular domain contains two tyrosine residues, one within an ITIM-like motif that is a potential docking site for phosphatases (1). The extracellular domain sequence of human and mouse PVRIG have approximately 65% similarity. The human PVRIG gene is preferentially expressed in lymphocytes, such as T cells and NK cells, but not in monocyte derived dendritic cells (1). PVRIG functions as a cell surface receptor for Nectin-2/CD112, a cell surface protein that is widely expressed on antigen-presenting cells and tumor cells. Disrupting the PVRIG/Nectin-2 interaction enhances human T cell response, suggesting PVRIG is a novel checkpoint for human T cells (1).

References:

1. Zhu, Y., *et.al.* (2016) J. Exp. Med. **213**:167.

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