

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LRRC32/GARP in ELISAs.
Source	Monoclonal Rat IgG _{2A} Clone # 855151
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human LRRC32/GARP Met1-Asn627 Accession # Q14392
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

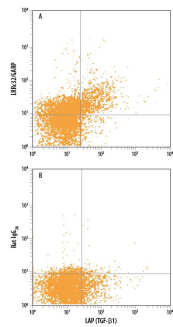
APPLICATIONS

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	10 μ L/10 ⁶ cells	See Below

DATA

Flow Cytometry



Detection of LRRC32/GARP in Human PBMCs stimulated to induce Tregs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) stimulated to induce Regulatory T Cells (Tregs) treated with 10 μ g/mL Anti-CD3, 5 μ g/mL Anti-CD28, 10 ng/mL Recombinant Human TGF- β 1 (Catalog # 240-B), and 20 ng/mL Recombinant Human IL-2 (Catalog # 202-IL) for 48 hours were stained with Mouse Anti-Human LAP TGF- β 1 PE-conjugated Monoclonal Antibody (Catalog # FAB2463P) and either (A) Rat Anti-Human LRRC32/GARP APC-conjugated Monoclonal Antibody (Catalog # FAB6055A) or (B) Rat IgG_{2A} Allophycocyanin Isotype Control (Catalog # IC006A). View our protocol for [Staining Membrane-associated Proteins](#).

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Leucine-rich repeat protein 32 (LRRC32), also known as GARP (glycoprotein A repetitions predominant), is an 80 kDa type I transmembrane glycoprotein (1). Mature human LRRC32 consists of a 608 amino acid (aa) extracellular domain (ECD) that contains 22 leucine-rich repeats, a 21 aa transmembrane segment, and a 14 aa cytoplasmic domain (2, 3). Within the ECD, human LRRC32 shares approximately 80% aa sequence identity with mouse and rat LRRC32. LRRC32 is widely expressed during embryogenesis and on adult platelets (4, 5). Human LRRC32 is identified as a lineage specific key receptor for human T cells. It is selectively expressed on activated FOXP3⁺ regulatory T cells (Treg) (6-10). LRRC32 expression promotes the acquisition of a Treg phenotype including reduced cellular proliferation, reduced cytokine secretion, and the capacity to suppress the proliferation of naïve T cells (6-8). LRRC32 binds directly to the TGF- β latency associated peptide (LAP) and tethers latent TGF- β on the surface of activated Treg cells (9, 10). The presentation of TGF- β on Tregs contributes to their ability to suppress naïve T cell proliferation (11).

References:

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5. Macaulay, I.C. *et al.* (2007) *Blood* **109**:3260.
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