

DESCRIPTION

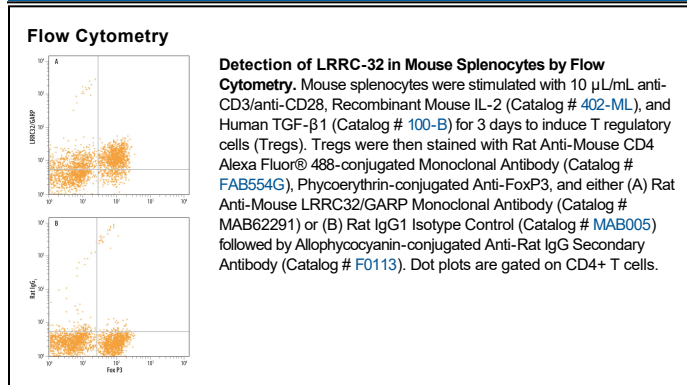
Species Reactivity	Mouse
Specificity	Detects mouse LRRC32/GARP in direct ELISAs. In direct ELISAs, approximately 50% cross-reactivity with recombinant human (rh) LRRC32 is observed and no cross-reactivity with rhLRRC3, rhLRRC4, or rhNGL-3/LRRC4B is observed.
Source	Monoclonal Rat IgG ₁ Clone # 725226
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse LRRC32/GARP Ile18-Asn628 Accession # NP_001106850
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	2.5 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.	

DATA



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. <ul style="list-style-type: none"> ● 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

Leucine-rich repeat protein 32 (LRRC32), also known as GARP (glycoprotein A repetitions predominant), is an 80 kDa type I transmembrane glycoprotein (1). Mature mouse 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 (2-4). Within the ECD, mouse LRRC32 shares 80 and 94% aa sequence identity with human and rat LRRC32, respectively. LRRC32 is widely expressed during embryogenesis and on adult platelets (4, 5). Among 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:

1. Battaglia, M. and M.G. Roncarolo (2009) *Eur. J. Immunol.* **39**:3296.
2. Ollendorff, V. *et al.* (1994) *Cell Growth Differ.* **5**:213.
3. Bella, J. *et al.* (2008) *Cell Mol Life Sci.* **65**:2307.
4. Roubin, R. *et al.* (1996) *Int. J. Dev. Biol.* **40**:545.
5. Macaulay, I.C. *et al.* (2007) *Blood* **109**:3260.
6. Wang, R. *et al.* (2008) *PLoS ONE* **3**:e2705.
7. Wang, R. *et al.* (2009) *Proc. Natl. Acad. Sci.* **106**:13439.
8. Probst-Kepper, M. *et al.* (2009) *J. Cell. Mol. Med.* **13**:3343.
9. Tran, D.Q. *et al.* (2009) *Proc. Natl. Acad. Sci.* **106**:13445.
10. Stockis, J. *et al.* (2009) *Eur. J. Immunol.* **39**:3315.
11. Vignali, D.A. *et al.* (2008) *Nat. Rev. Immunol.* **8**:523.

PRODUCT SPECIFIC NOTICES

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