

## Anti-Human GARP Alexa Fluor® 647 (To Be Discontinued. Refer to

### Cat. No. 50-9882)

Catalog Number: 51-9882 Also known as: LRRC32, Garpin RUO: For Research Use Only. Not for use in diagnostic n

RUO: For Research Use Only. Not for use in diagnostic procedures.



#### **Product Information**

Contents: Anti-Human GARP Alexa Fluor® 647 (To Be Discontinued. Refer to Cat. No. 50-9882) [REF] Catalog Number: 51-9882

Clone: G14D9 Concentration: 5 uL (0.5 ug)/test Host/Isotype: Rat IgG2a, kappa Normal human peripheral blood cells were stimulated with immobilized Anti-Human CD3 Functional Grade Purified (cat. 16-0037), soluble Anti-Human CD28 Functional Grade Purified (cat. 16-0289), and Human IL-2 Recombinant Protein (cat. 14-8029) for 24 hours. Cells were surface stained with Anti-Human CD4 FITC (cat. 11-0048) and Rat IgG2a K Isotype Control Alexa Fluor® 647 (cat. 51-4321) (left) or Anti-Human GARP Alexa Fluor® 647 (right). Cells were then fixed and permeabilized with the Foxp3 Staining Buffer Set (cat. 00-5523) followed by intracellular staining with Anti-Human Foxp3 eFluor® 450 (cat. 48-4776). CD4+ cells in the lymphocyte gate were used for analysis.

	Formulation: aqueous buffer, 0.09% sodium
	azide, may contain carrier protein/stabilizer
r	Temperature Limitation: Store at 2-8°C. Do not
-4	freeze. Light-sensitive material.
LOT	Batch Code: Refer to vial
$\Sigma$	Use By: Refer to vial
A	Containa andium arida
$\Delta$	Contains sodium azide

#### Description

The G14D9 monoclonal antibody reacts with human Glycoprotein A Repetitions Predominant (GARP, also known as LRRC32 or Garpin). GARP is an approximately 80 kDa glycoprotein that is expressed on the cell surface. Using northern blot, RT-PCR or microarray analyses, the expression of GARP has been reported in placenta, lung, kidney, heart, ovary, liver, skeletal muscle, and pancreas. Protein expression has been observed on megakaryocytes, platelets and activated regulatory T (Treg) cells. The expression of GARP on the surface of activated Treg cells has been reported to be necessary for their suppressive function, possibly related to its role as a cell surface receptor for LAP/TGF beta.

#### **Applications Reported**

This G14D9 antibody has been reported for use in flow cytometric analysis.

#### **Applications Tested**

This G14D9 antibody has been pre-titrated and tested by flow cytometric analysis of stimulated normal human peripheral blood cells. This can be used at 5  $\mu$ L (0.5  $\mu$ g) per test. A test is defined as the amount ( $\mu$ g) of antibody that will stain a cell sample in a final volume of 100  $\mu$ L. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test.

#### References

Stockis J, Colau D, Coulie PG, Lucas S. Membrane protein GARP is a receptor for latent TGF-beta on the surface of activated human Treg. Eur J Immunol. 2009 Dec;39(12):3315-22.

Wang R, Kozhaya L, Mercer F, Khaitan A, Fujii H, Unutmaz D. Expression of GARP selectively identifies activated human FOXP3+ regulatory T cells. Proc Natl Acad Sci USA. 2009 Aug 11;106(32):13439-44.



# Anti-Human GARP Alexa Fluor® 647 (To Be Discontinued. Refer to Cat. No. 50-9882)

#### Catalog Number: 51-9882 Also known as: LRRC32, Garpin RUO: For Research Use Only. Not for use in diagnostic procedures.

Tran DQ, Andersson J, Wang R, Ramsey H, Unutmaz D, Shevach EM. GARP (LRRC32) is essential for the surface expression of latent TGF-beta on platelets and activated FOXP3+ regulatory T cells. Proc Natl Acad Sci USA. 2009 Aug 11;106(32):13445-50.

Wang R, Wan Q, Kozhaya L, Fujii H, Unutmaz D. Identification of a regulatory T cell specific cell surface molecule that mediates suppressive signals and induces Foxp3 expression. PLoS One. 2008 Jul 16;3(7):e2705.

Macaulay IC, Tijssen MR, Thijssen-Timmer DC, Gusnanto A, Steward M, Burns P, Langford CF, Ellis PD, Dudbridge F, Zwaginga JJ, Watkins NA, van der Schoot CE, Ouwehand WH. Comparative gene expression profiling of in vitro differentiated megakaryocytes and erythroblasts identifies novel activatory and inhibitory platelet membrane proteins. Blood. 2007 Apr 15;109(8):3260-9.

Ollendorff V, Noguchi T, deLapeyriere O, Birnbaum D. The GARP gene encodes a new member of the family of leucine-rich repeat-containing proteins. Cell Growth Differ. 1994 Feb;5(2):213-9.

#### **Related Products**

00-5523 Foxp3 / Transcription Factor Staining Buffer Set 11-0048 Anti-Human CD4 FITC (OKT4 (OKT-4)) 14-8029 Human IL-2 Recombinant Protein 16-0037 Anti-Human CD3 Functional Grade Purified (OKT3) 16-0289 Anti-Human CD28 Functional Grade Purified (CD28.2) 48-4776 Anti-Human Foxp3 eFluor® 450 (PCH101) 51-4321 Rat IgG2a K Isotype Control Alexa Fluor® 647 (To Be Discontinued. Refer to Cat. No. 50-4321) (eBR2a)

#### Legal

Alexa Fluor® and Pacific Blue® are registered trademarks of and licensed under patents assigned to Molecular Probes, Inc. for research use only. This product is subject to an agreement between Molecular Probes, Inc. and eBioscience, and the manufacture, use, sale or import of this product may be subject to one or more U.S. patents, pending applications and corresponding foreign equivalents, owned by Molecular Probes, Inc. (a wholly owned subsidiary of Invitrogen Corp). The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product for life science research or as an ASR. The buyer cannot use this product for manufacturing or for any other screening (specifically including use in combination with microarrays or High Content Screening) or testing purpose, other than as an ASR. For information on purchasing a license to this product for purposes other than life science research or use as an ASR, contact Molecular Probes, Inc.