SYSY Antibodies

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GARP (LRC32)

Cat.No. 221 111; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Azide was added before lyophilization. For **reconstitution** add 100 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	**WB**: not recommended **IP**: not tested yet **ICC**: not tested yet **IHC**: not tested yet **IHC-P (FFPE)**: not tested yet **FACS**: yes
Clone	272G6
Subtype	IgG3 (κ light chain)
Immunogen	Synthetic peptide corresponding to AA 296 to 308 from human GARP (UniProt Id: Q14392)
Reactivity	Reacts with: human (Q14392). Other species not tested yet.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Background

Regulatory T-cells (T_{reg}-cells) are involved in the homeostasis of immune reactions and tolerance. These specialized T-cells suppress auto-reactive cells and inhibit autoimmunity. Development and function of T_{reg}-cells depend on the expression of the transcription factor FOX3P.
The orphan receptor **GARP**, also referred to as **LRRC 32**, is exclusively found on T_{reg}-cells upon stimulation with anti-CD3/IL-2 or anti-CD3/anti-CD28/IL-2. Additionally it has been shown, that ectopic GARP expression strongly induces FOXP3.

Selected References for 221 111

Regulatory T cells with reduced repressor capacities are extensively amplified in pulmonary sarcoid lesions and sustain granuloma formation.
Rappl G, Pabst S, Riemann D, Schmidt A, Wickenhauser C, Schütte W, Hombach AA, Seliger B, Grohé C, Abken H
Clinical immunology (Orlando, Fla.) (2011) 1401: 71-83. . **FACS**

GARP: a key receptor controlling FOXP3 in human regulatory T cells.
Probst-Kepper M, Geffers R, Kröger A, Viegas N, Erck C, Hecht HJ, Lünsdorf H, Roubin R, Moharregh-Khiabani D, Wagner K, Ocklenburg F, et al.
Journal of cellular and molecular medicine (2009) 139B: 3343-57. . **FACS**

Monoclonal antibodies against GARP/TGF-β1 complexes inhibit the immunosuppressive activity of human regulatory T cells in vivo.
Cuende J, Liénart S, Dedobbeleer O, van der Woning B, De Boeck G, Stockis J, Huygens C, Colau D, Somja J, Delvenne P, Hannon M, et al.
Science translational medicine (2015) 7284: 284ra56. .

Selected General References

Treg-therapy allows mixed chimerism and transplantation tolerance without cytoreductive conditioning.
Pilat N et al. Am. J. Transplant. (2010) PubMed:20148810

The Tregs' world according to GARP.
Battaglia M et al. Eur. J. Immunol. (2009) PubMed:19904770

Identification of a regulatory T cell specific cell surface molecule that mediates suppressive signals and induces Foxp3 expression.
Wang R et al. PLoS ONE (2008) PubMed:18628982

CD4+CD25+FoxP3+ regulatory T cells in autoimmune diseases.
Valencia X et al. Nat Clin Pract Rheumatol (2007) PubMed:17968332

Access the online factsheet including applicable protocols at https://sysy.com/product/221111 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All SYSY antibodies and control proteins/peptides are shipped lyophilized (vacuum freeze-dried). In this form, they remain stable without loss of quality at ambient temperatures for several weeks.

Storage of Sealed Vials after Delivery

- **Unlabeled** and **biotin-labeled antibodies** and **control proteins** should be stored at **4°C** before reconstitution. **Do not freeze lyophilized antibodies**. Temperatures below 0°C may impair performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long-term storage of lyophilized fluorophore-conjugates may cause aggregation.
- **Control peptides** should be stored at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- **Do not use frost-free ("no-frost") freezers.** These units periodically warm to remove ice buildup, causing freeze–thaw cycles that can damage antibodies.
- Store vials in areas with minimal temperature fluctuation - preferably toward the back of the freezer, not on the door.
- Aliquot reconstituted antibodies and store at –20°C to –80°C.
- Avoid very small aliquots (<20 µL), as evaporation and adsorption to tube surfaces can reduce antibody concentration and activity.
- Use the smallest practical storage vial to minimize surface area.
- Adding glycerol to a final concentration of 50% prevents freezing at -20°C, allowing storage in liquid form and effectively avoiding freeze–thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C

Monoclonal Antibodies

- **Ascites and hybridoma supernatant:** Store at -20°C to -80°C
  Prolonged storage at 4°C is not recommended, as proteases present in ascites may degrade antibodies.
- **Purified IgG:** Store at -20°C to -80°C
  Adding a carrier protein (e.g., BSA) enhances long-term stability.
  Many SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Polyclonal Antibodies

- **Crude antisera:** Can be stored at 4°C with antimicrobials added, but -20°C to -80°C is preferred
- **Affinity-purified antibodies:** Less stable than antisera; store at -20°C to -80°C
  Adding a carrier protein such as BSA improves long-term stability.
  Most SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Fluorescence-labeled Antibodies

- Store as a liquid with 1:1 (v/v) glycerol at -20°C, and protect from light exposure

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All purified SYSY antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the volume of deionized water specified in the corresponding datasheet. If a larger final volume is desired, first add the recommended amount of water, then adjust with PBS and, if needed, add a stabilizing carrier protein (e.g., BSA) to a final concentration of 2%. Some SYSY antibodies already contain albumin; please take this into account before adding additional carrier protein.

For complete reconstitution, carefully remove the vial cap. After adding water, briefly vortex the solution. To collect the liquid at the bottom of the vial, place the vial inside a 50 ml centrifuge tube padded with paper and centrifuge briefly.

- If desired, small amounts of azide or thimerosal may be added to prevent microbial growth. This is particularly recommended when storing an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add glycerol 1:1 (v/v) to achieve a final concentration of 50%. This prevents freezing at –20°C and keeps the antibody in liquid form, effectively avoiding freeze–thaw cycles.
- Glycerol may also be added to unlabeled primary antibodies as a general measure to prevent freeze–thaw damage.
- For further guidance, please refer to our **storage tips** and recommendations for reconstituted antibodies, control peptides, and control proteins.