## **R** SYSTEMS a **biotechne** brand

# Mouse Lgr5/GPR49 PE-conjugated Antibody

Monoclonal Rat IgG<sub>2B</sub> Clone # 803420 Catalog Number: FAB8240P

100 µg

DESCRIPTION		
Species Reactivity	Mouse	
Specificity	Detects mouse Lgr5/GPR49 in ELISAs. Stains mouse Lgr5 transfected cells but not irrelevant transfectants in Flow Cytometry and Immunocytochemistry. This antibody, also known as "RD20", has been found to detect an epitope in C-terminal LRR cap of Lgr5 (Ref. 1).	
Source	Monoclonal Rat IgG <sub>2B</sub> Clone # 803420	
Purification	Protein A or G purified from hybridoma culture supernatant	
Immunogen	<i>E. coli-</i> derived recombinant mouse Lgr5/GPR49 Lys375-Pro547 Accession # Q9Z1P4	
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 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 She (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.

Sample

Recom	commended	
Concer	ntration	
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Flow Cytometry

See Below 0.25-1 µg/106 cells

#### DATA

Flow Cytometry	Detection of Lgr5/GPR49 in HEK293 Human Cell Line Transfected with Mouse Lgr5/GPR49 and eGFP by Flow
Lgs/OPH1	Cytometry. HEK293 human embryonic kidney cell line transfected with either (A) mouse Lgr5/GPR49 or (B) irrelevant transfectants and eGFP was stained with Rat Anti-Mouse Lgr5/GPR49 PE-conjugated Monoclonal Antibody (Catalog # FAB8240P). Quadrant markers were set based on control antibody staining (Catalog # IC013P). View our
	protocol for Staining Membrane-associated Proteins.
eorp	

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. 12 months from date of receipt, 2 to 8 °C as supplied.

### BACKGROUND

Leucine-rich repeat G-protein-coupled receptor 5 (Lgr5), also called GPR49, is a 907 amino acid (aa), approximately 97 kDa (calculated), seven-transmembrane glycoprotein receptor in the Lgr family of cell surface receptors. The subfamily of Lgrs comprising Lgr4, Lgr5, and Lgr6 are G-protein-independent mediators of the potentiating effect of R-Spondins on Wnt signaling (2). Lgr5 binds and forms complexes with R-Spondins, Frizzled Wnt receptors and LRP Wnt co-receptors. The region of the mouse Lgr5 long extracellular domain used as an immunogen shares 90% and 95% amino acid sequence identity with human and rat Lgr5, respectively. Lgr5 is found on embryonic and adult epithelial stem cells (3). Lgr5<sup>+</sup> stem cells can produce all epithelial cell types of the intestinal crypts (4). It is upregulated in stem cells that give rise to cancers such as intestinal, hepatocellular, pancreatic and ovarian carcinomas (5,6). This antibody has been referred to as "RD20" by Peng et al. (1).

### References:

- 1. Peng et al. (2013) Cell Rep. 3(6):1885.
- de Lau et al. (2014) Genes Dev. 28(4):305. 2.
- 3. Barker et al. (2013) Development 140(12):2484.
- 4. Clevers (2013) Nature 495(7439):53.
- 5. Wu et al. (2014) Nat Commun 5:3149
- Jang et al. (2013) PLoS One 8(12):e82390495. 6.

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