Technical Data Sheet

BV510 Rat Anti-Human Lgr5 (N-Terminal)

Product Information

Material Number:	563211
Alternate Name:	GPR49, GPR67, HG38
Size:	50 tests
Vol. per Test:	5 µl
Clone:	8F2
Immunogen:	Human LGR5 DNA
Isotype:	Rat IgG2b, ĸ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ${\leq}0.09\%$ sodium azide.

Description

Lgr5 (leucine-rich-repeat-containing G-protein-coupled receptor 5) is a seven transmembrane-domain receptor that is a target gene for Wnt and marks stem cells in the small intestine, colon, stomach, and hair follicle. Lgr5 was initially identified as a potential stem cell marker due to restricted expression of Lgr5 in the intestinal crypt and labeling of rapidly cycling cells of the colon and intestine. Using both lineage tracing and organoid culture experiments, Lgr5 positive cells are capable of generating all types of the small intestine epithelium hence indicating that Lgr5 marks stem cells of the small intestine and colon. R-spondin growth factors, which are secreted agonists of the Wnt pathway, bind Lgr5. The binding of R-spondins to Lgr5 leads to recruitment of the Frizzled/LRP Wnt receptor complex, which binds to Wnt ligands and leads to downstream Wnt signaling. Lgr5 is up-regulated in colon and ovarian cancers and has been implicated in promotion of tumor growth and metastasis

The 8F2 monoclonal antibody recognizes an epitope in the N-terminal region of Human Lgr5.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon™ BV510 can be excited by the violet laser and detected in the BD Horizon™ V500 (525/50-nm) filter set. BD Horizon[™] BV510 conjugates are useful for the detection of dim markers off the violet laser.



Flow cvtometric analysis of LGR5 expression on human LGR5-transfected cells. Human LS-174T colorectal adenocarcinoma cells transfected with human LGR5 (cells from Dr. Hans Clevers, Hubrecht Institute) were cultured and then harvested using Accutase™ Cell Detachment Solution (Cat. No. 561527). The cells were stained with either BD Horizon™ BV510 Rat IgG2b, κ Isotype Control (Cat. No. 562951; dashed line histograms) or BD Horizon™ BV510 Rat Anti-Human Lgr5 (N-Terminal) antibody (Cat. No. 563211; solid line histograms) at matched concentrations The fluorescence histograms were derived from gated events based on the light scattering characteristics of viable LS 174T cells. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD HorizonTM BV510 under optimum conditions, and unconjugated antibody and free BD HorizonTM BV510 were removed.

Asia Pacific

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Application Notes

Application

Flow cytometry

Routinely Tested

Latin America/Caribbean

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562951	BV510 Rat IgG2b, κ Isotype Control	50 µg	R35-38
561527	Accutase [™] Cell Detachment Solution	100 ml	(none)

Product Notices

- This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^{6} cells in a 100-µl experimental 1. sample (a test).
- 2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
- An isotype control should be used at the same concentration as the antibody of interest. 3
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols. 4.
- Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before 5. discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
- 7. Brilliant VioletTM 510 is a trademark of Sirigen.
- Accutase is a registered trademark of Innovative Cell Technologies, Inc. 8.

References

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