

PRODUCT DATA SHEET

ANTI-LGR4 (GPR48)

MONOCLONAL ANTIBODY

PRODUCT INFORMATION

Catalog Number:	GM-0605	Clone:	BBX-3A8
Description:	purified monoclonal rat antibody	Specificity:	anti-human LGR4, cross reactivity with murine LGR4
Isotype:	IgG2a, kappa	Purification:	Protein G
Storage:	short term: 2°C – 8°C; long term: -20°C (avoid repeated freezing and thawing)	Buffer:	phosphate buffered saline, pH 7.2
Immunogen:	genetic immunization with cDNA encoding human LGR4	Selection:	based on recognition of the complete native protein expressed on transfected mammalian cells

WORKING DILUTIONS

Flow cytometry:	1.2 µg/10 ⁶ cells
CELISA:	1:200 – 1:400
For each application a titration should be performed to determine the optimal concentration.	

SPECIFICITY TESTING BY FLOW CYTOMETRY

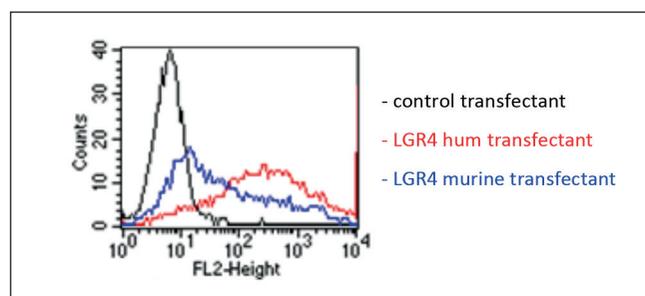


Fig. 1: FACS analysis of BOSC23 cells using BBX-3A8 Cat.# GM-0605. BOSC23 cells were transiently transfected with an expression vector encoding either LGR4-hum (red curve), LGR4-murine (blue curve) or an irrelevant protein (control transfectant: black curve). Binding of BBX-3A8 was detected with a PE-conjugated secondary antibody. A positive signal was obtained with LGR4-hum and LGR4-mur transfected cells.

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SDS PAGE ANALYSIS OF BBX-3A8

The antibody was purified by protein G affinity chromatography from cell culture supernatants.

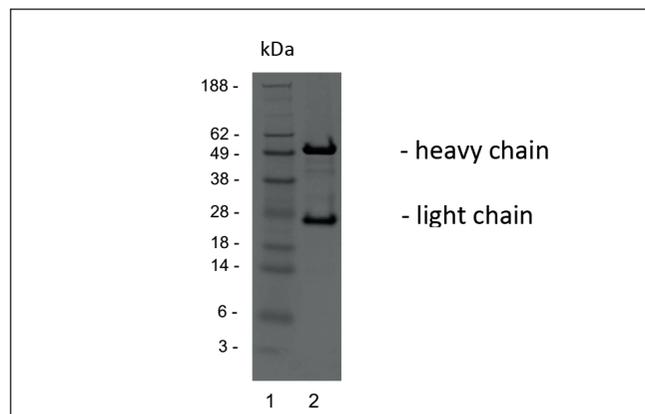


Fig.2: SDS-PAGE analysis of purified BBX-3A8 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 µg of purified BBX-3A8 antibody. Proteins were separated by SDS-PAGE and stained with RAPID Stain™ Reagent.

BACKGROUND

LGR4 (Leucine-rich repeat- containing G protein-coupled receptor 4) belongs to the superfamily of G protein-coupled receptors (GPCRs). It is a 951 amino acid multi-pass membrane protein and has multiple N-terminal leucine-rich repeats, which are important for interaction with the glycoprotein ligands, and 7 transmembrane domains (1, 3). LGR4 is highly expressed in the adult human pancreas but also with moderate levels of expression in placenta, kidney, brain and heart (2). LGR4 functions as an orphan receptor that may be involved in physiologic activities throughout the cell. It is overexpressed in various cancer types and is thought to enhance carcinoma invasiveness and metastasis, suggesting an important role in tumor progression.

REFERENCES

1. **Hsu SY, Liang SG, Hsueh AJ (1998).** Characterization of two LGR genes homologous to gonadotropin and thyrotropin receptors with extracellular leucine-rich repeats and a G protein-coupled, seven-transmembrane region. *Mol Endocrinol.* 12(12):1830-45
2. **Loh ED, Broussard SR, Liu Q, Copeland NG, Gilbert DJ, Jenkins NA, Kolakowski, LF Jr.(2000).** Chromosomal localization of GPR48, a novel glycoprotein hormone receptor like GPCR, in human and mouse with radiation hybrid and interspecific backcross mapping. *Cytogenet Cell Genet.* 89(1-2):2-5
3. **Loh ED, Broussard SR, Kolakowski LF (2001).** Molecular characterization of a novel glycoprotein hormone G-protein-coupled receptor. *Biochem Biophys Res Commun.* 282(3):757-64

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