# PRODUCT DATA SHEET
# ANTI-LGR4 (GPR48) MONOCLONAL ANTIBODY

## PRODUCT INFORMATION

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| **Catalog Number:** | GM-0606 | **Clone:** | BBX-1H1 |
| **Description:** | purified monoclonal rat antibody | **Specificity:** | anti-human LGR4 (GPR48) |
| **Isotype:** | IgG2a, kappa | **Purification:** | Protein G |
| **Storage:** | short term: 2°C – 8°C;<br>long term: –20°C<br>(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

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| **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 AND BY SPECTRAL CONFOCAL MICROSCOPY

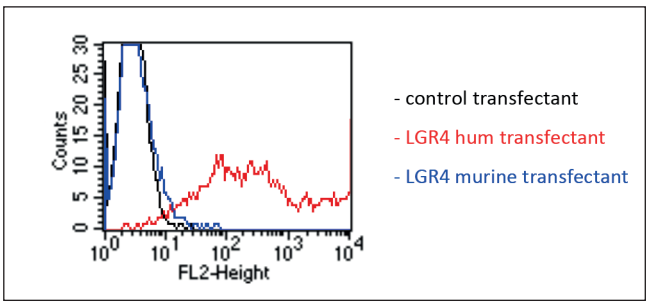


**Fig. 1:** FACS analysis of BOSC23 cells using BBX-1H1. BOSC23 cells were transiently transfected with an expression vector encoding either LGR4-hum (red curve), LGR4-murine (blue curve), or an irrelevant protein (control transfectant: black curve). Binding of BBX-1H1 was detected with a PE-conjugated secondary antibody. A positive signal was obtained only with LGR4-hum transfected cells.

## SDS PAGE ANALYSIS OF BBX-1H1

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

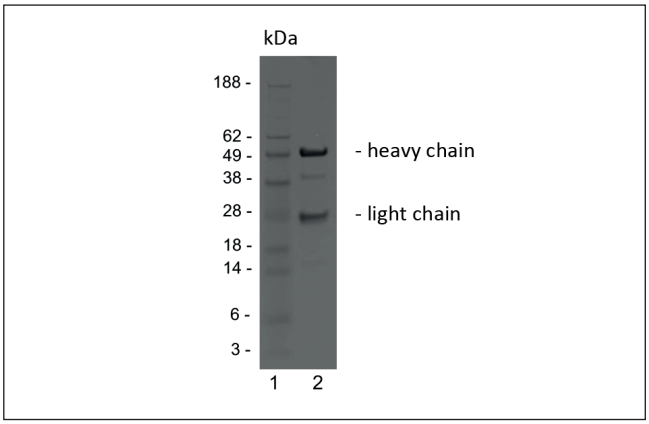


**Fig. 2:** SDS-PAGE analysis of purified BBX-1H1 monoclonal antibody.
Lane 1: molecular weight marker, Lane 2: 2 µg of purified BBX-1H1 antibody.
Proteins were separated by SDS-PAGE and stained with RAPID Stain™ Reagent.

## 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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