Product Data Sheet
Rat anti-human LGR5 (GPR49) monoclonal antibody (GM-0607)

Product information

Catalog Number: GM-0607
Clone: BEE-6F7
Description: purified monoclonal rat antibody
Specificity: anti-human LGR5 (GPR49)
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 immunisation with cDNA encoding human LGR5
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 BEE-6F7. BOSC23 cells were transiently transfected with an expression vector encoding either LGR5-hum (green curve), or an irrelevant protein (control transfectant (red curve). Binding of BEE-6F7 was detected with a PE-conjugated secondary antibody. A positive signal was obtained only with LGR5-hum transfected cells.
SDS page analysis of BEE-6F7

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

![Fig.2: CGE analysis of purified GM-0607 monoclonal antibody. Lane 1: molecular weight marker, Lane 2: 2 µg of purified GM-0607 antibody. Proteins were separated by CGE (capillary gel electrophoresis, Agilent 2100 Bioanalyzer). Internal control bands (240 kDa / 7 kDa / 4.5 kDa).](image)

Background

LGR5 (Leucine-rich repeat-containing G protein-coupled receptor 5), also known as GPR49, belongs to the superfamily of G protein-coupled receptors (GPCRs) (1). It is a 907 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. LGR5 is expressed across a diverse range of tissue such as in the muscle, placenta, spinal cord and brain and particularly as a biomarker of adult stem cells in certain tissues (2). LGR5 is a member of the Wnt signaling pathway. Although its ligand remains elusive, it has been shown that costimulation with R-spondin 1 and Wnt-3a induce increased internalization of LGR5 (3). LGR5 is overexpressed in certain cancer types, e.g. gastrointestinal tumours and is thought to represent a tumour suppressor, although its role there is still unclear.

References

