

Lgr5/GPR49 Protein, Human (HEK293, hFc)

Cat. No.:	HY-P700891
Synonyms:	LGR5; GPR49; GPR67; HG38; G-protein coupled receptor 49; G-protein coupled receptor 67; G-protein coupled receptor HG38
Species:	Human
Source:	HEK293
Accession:	O75473-1 (G22-P543)
Gene ID:	8549
Molecular Weight:	110-120 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μ m filtered solution of PBS, 5mM DTT, pH 7.4. Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>The Lgr5/GPR49 Protein serves as the receptor for R-spondins, functioning to potentiate the canonical Wnt signaling pathway while concurrently serving as a distinctive stem cell marker in the intestinal epithelium and hair follicle. Upon binding to R-spondins (RSPO1, RSPO2, RSPO3, or RSPO4), Lgr5/GPR49 associates with phosphorylated LRP6 and frizzled receptors activated by extracellular Wnt, initiating the canonical Wnt signaling pathway and amplifying the expression of target genes. In contrast to classical G-protein coupled receptors, Lgr5/GPR49 does not activate heterotrimeric G-proteins to transduce the signal, highlighting its unique regulatory role in Wnt signaling. It plays a crucial role in the development and maintenance of adult intestinal stem cells during postembryonic development and has been identified in a complex with RNF43 and RSPO1. Additionally, Lgr5/GPR49 interacts with other R-spondin ligands, including RSPO2, RSPO3, and RSPO4, emphasizing its diverse participation in cellular signaling pathways.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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