

Lgr5/GPR49 Protein, Human (CHO, hFc)

Cat. No.:	HY-P79308
Synonyms:	Leucine-rich repeat-containing G-protein coupled receptor 5; LGR5; G-protein coupled receptor 49; G-protein coupled receptor 67; G-protein coupled receptor HG38; GPR49; GPR67; Leucine-rich Repeat Containing G Protein-coupled Receptor 5
Species:	Human
Source:	CHO
Accession:	O75473 (G22-I560)
Gene ID:	8549
Molecular Weight:	88-110 kDa

PROPERTIES

AA Sequence

G S S P R S G V L L	R G C P T H C H C E	P D G R M L L R V D	C S D L G L S E L P
S N L S V F T S Y L	D L S M N N I S Q L	L P N P L P S L R F	L E E L R L A G N A
L T Y I P K G A F T	G L Y S L K V L M L	Q N N Q L R H V P T	E A L Q N L R S L Q
S L R L D A N H I S	Y V P P S C F S G L	H S L R H L W L D D	N A L T E I P V Q A
F R S L S A L Q A M	T L A L N K I H H I	P D Y A F G N L S S	L V V L H L H N N R
I H S L G K K C F D	G L H S L E T L D L	N Y N N L D E F P T	A I R T L S N L K E
L G F H S N N I R S	I P E K A F V G N P	S L I T I H F Y D N	P I Q F V G R S A F
Q H L P E L R T L T	L N G A S Q I T E F	P D L T G T A N L E	S L T L T G A Q I S
S L P Q T V C N Q L	P N L Q V L D L S Y	N L L E D L P S F S	V C Q K L Q K I D L
R H N E I Y E I K V	D T F Q Q L L S L R	S L N L A W N K I A	I I H P N A F S T L
P S L I K L D L S S	N L L S S F P I T G	L H G L T H L K L T	G N H A L Q S L I S
S E N F P E L K V I	E M P Y A Y Q C C A	F G V C E N A Y K I	S N Q W N K G D N S
S M D D L H K K D A	G M F Q A Q D E R D	L E D F L L D F E E	D L K A L H S V Q C
S P S P G P F K P C	E H L L D G W L I		

Biological Activity Measured by its binding ability in a functional ELISA. Immobilized Human R-Spondin 1 at 5 µg/mL (100 µL/well) can bind Biotinylated Human LGR5. The ED₅₀ for this effect is 42.14 ng/mL.

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

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**

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.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA