GPR56 Protein, Human (HEK293, His)

Cat. No.:	HY-P75796
Synonyms:	Adhesion G-protein coupled receptor G1; ADGRG1 NT; ADGRG1; GPR56; TM7LN4; TM7XN1
Species:	Human
Source:	HEK293
Accession:	Q9Y653-2/NP_958933.1 (R26-V342)
Gene ID:	9289
Molecular Weight:	45-70 kDa

PROPERTIES

AA Sequence	R G H R E D F R F C S Q R N Q T H R S S L H Y K P T P D L R I S I E N S E E A L T V H A P F P A A H P A S R S F P D P R G L Y H F C L Y W N R H A G R L H L L Y G K R D F L L S D K A S S L L C F Q H Q E E S L A Q G P P L L A T S V T S W W S P Q N I S L P S A A S F T F S F H S P P H T A A H N A S V D M C E L K R D L Q L L S Q F L K H P Q K A S R R P S A A P A S Q Q L Q S L E S K L T S V R F M G D M V S F E E D R I N A T V W K L Q P T A G L Q D L H I H S R Q E E E Q S E I M E Y S V L L P R T L F Q R T K G R S G E A E K R L L L V D F S S Q A L F Q D K N S S Q V L G E K V L G I V V Q N T K V A N L T E P V V L T F Q H Q L Q P K N V
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	GPR56 Protein functions as a receptor pivotal in cell adhesion and likely involved in cell-cell interactions. It plays a crucial role in mediating cell matrix adhesion during the development of neurons and hematopoietic stem cells. In the developing brain, GPR56 acts as a receptor for collagen III/COL3A1, contributing to the regulation of cortical development and playing a specific role in maintaining pial basement membrane integrity and cortical lamination. The interaction with the COL3A1 ligand inhibits neuronal migration and activates the RhoA pathway through coupling to GNA13 and possibly GNA12.

Additionally, GPR56 is implicated in the maintenance of hematopoietic stem cells and/or leukemia stem cells within the bone marrow niche. Notably, GPR56 assumes a critical role in cancer progression, exhibiting a dual function by inhibiting VEGFA production and angiogenesis through a PRKCA-mediated signaling pathway, as well as activating VEGFA production to promote angiogenesis. Moreover, GPR56 proves essential in testis development, highlighting its diverse and significant contributions to various cellular processes.

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