Human VIGR/GPR126
Alexa Fluor® 750-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 1044430

Catalog Number: FAB10577S

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VIGR/GPR126 protein in direct ELISAs.
Source	Monoclonal Mouse IgG_{2A} Clone # 1044430
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell HEK293-derived human VIGR/GPR126 protein Cys38-Lys437 Accession # AAH75798.1
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	HEK293 Human Cell Line Transfected with Human VIGR/GPR126

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** • 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

VIGR (Vascular Inducible G Protein-coupled Receptor), also known as ADGRG6, DREG, and GPR126, is a neuronal 7 TM pass (G protein)-coupled receptor (GPCR) involved in myelination and glial and Schwann cell development (1, 2). Human VIGR cDNA encodes a 1221 amino acid (aa) residue membrane protein with a 37 aa signal peptide, a 825 aa extracellular domain (ECD) with 27 potential N-linked glycosylation sites, seven transmembrane segments that span between aa 863 and aa 1113, and a 108 aa residue cytoplasmic domain. Within ECD human VIGR shares 83% aa sequence identity with mouse and rat VIGR. VIGR is essential for the development of diverse organs (1, 2). Type IV collagen, a major constituent of the basement membrane, binds to VIGR and activates its signaling function (3). This interaction stimulated the production of cAMP in rodent Schwann cells, which require VIGR activity to differentiate, and in human embryonic kidney (HEK293) cells expressing exogenous VIGR. Laminin-211 binds a novel laminin-binding domain in VIGR N-terminal fragment between aa 446 and 807 (4). VIGR-Laminin-211 interactions regulate terminal differentiation and myelination by ensuring appropriate levels of cAMP for a given stage of Schwann cell development (4).

References:

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2. Engelstaedter, V. *et al.* (2012) BMC Cancer **12**:600.
3. Taylor-Papadimitriou, J. *et al.* (1999) Biochim. Biophys. Acta **1455**:301.
4. Geng, Y. *et al.* (2012) Front Oncol. **2**:76.
5. Tanida, S. *et al.* (2013) J Biol Chem. **288**:31842.
6. Beatson, R. *et al.* (2016) Nat Immunol. **17**:1273.
7. Piyush, T. *et al.* (2017) Cell Death Differ. **24**:1937.

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