Human gamma-Sarcoglycan/SGCG Alexa Fluor® 700-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 1112101

Catalog Number: FAB11731N

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects a synthetic peptide specific for Human SGCG around amino acid 190 in Direct ELISA.
Source	Monoclonal Mouse IgG_1 Clone # 1112101
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Synthetic Peptide Accession # Q13326
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

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

Sarcoglycan gamma (SGCG) is a transmembrane protein and a key component of the dystrophin-associated glycoprotein complex (DGC), with a molecular weight of approximately 35 kDa. The sarcoglycan complex, which includes SGCG, is critical for maintaining the structural integrity of muscle cell membranes and for linking the actin cytoskeleton to the extracellular matrix. SGCG is predominantly expressed in skeletal and cardiac muscle, where it plays a crucial role in stabilizing the muscle membrane during contraction. Mutations in the SGCG gene are associated with limb-girdle muscular dystrophy type 2C (LGMD2C), a progressive muscular dystrophy characterized by muscle weakness and membrane instability. Loss of SGCG function leads to disruption of the DGC, resulting in increased susceptibility to muscle membrane damage and impaired muscle regeneration. Recent studies suggest that SGCG may also be involved in signaling pathways regulating muscle homeostasis and repair. Its critical role in muscle integrity, disease pathogenesis, and signaling underscores its potential as a therapeutic target for the treatment of muscular dystrophies.

References:

1. Hack AA, Groh ME, McNally EM. Sarcoglycans in muscular dystrophy. Microsc Res Tech. 2000 Feb 1-15;48(3-4):167-80. doi: 10.1002/(SICI)1097-0029(20000201/15)48:3/43.0.CO;2-T. PMID: 10679964.
2. Groh S, Zong H, Goddeeris MM, Lebakken CS, Venzke D, Pessin JE, Campbell KP. Sarcoglycan complex: implications for metabolic defects in muscular dystrophies. J Biol Chem. 2009 Jul 17;284(29):19178-82. doi: 10.1074/jbc.C109.010728. Epub 2009 Jun 3. PMID: 19494113; PMCID: PMC2740540.
3. Bushby KM. The limb-girdle muscular dystrophies-multiple genes, multiple mechanisms. Hum Mol Genet. 1999;8(10):1875-82. doi: 10.1093/hmg/8.10.1875. PMID: 10469840.

PRODUCT SPECIFIC NOTICES

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