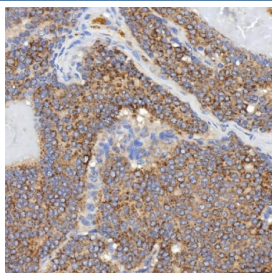


SGCE Antibody / Epsilon-sarcoglycan (RQ7584)

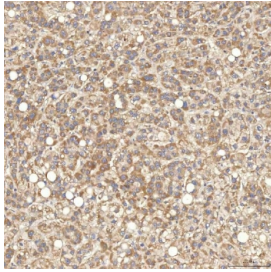
Catalog No.	Formulation	Size
RQ7584	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

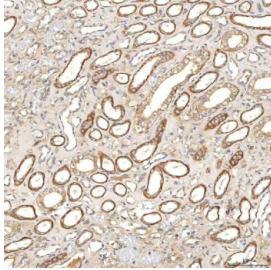
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	O43556
Localization	Cytoplasmic
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml
Limitations	This SGCE antibody is available for research use only.



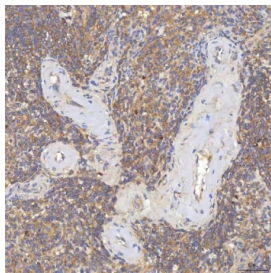
IHC staining of FFPE human breast cancer tissue with SGCE antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



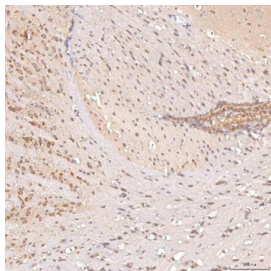
IHC staining of FFPE human liver cancer tissue with SGCE antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



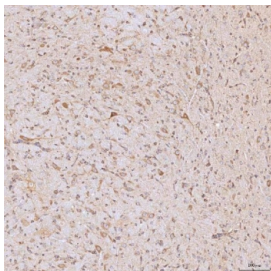
IHC staining of FFPE human renal cancer tissue with SGCE antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



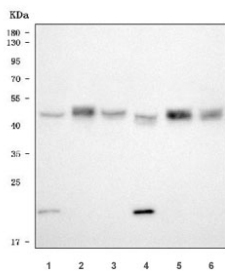
IHC staining of FFPE human spleen tissue with SGCE antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



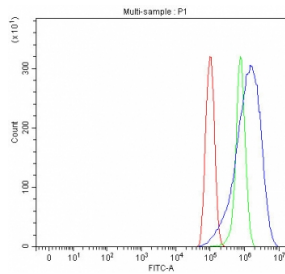
IHC staining of FFPE mouse brain tissue with SGCE antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



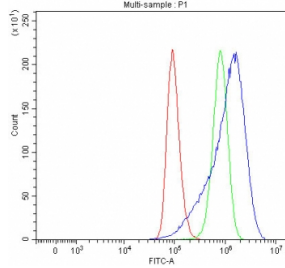
IHC staining of FFPE rat brain tissue with SGCE antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot testing of 1) human U-251, 2) rat brain, 3) rat heart, 4) rat C6, 5) mouse brain and 6) mouse heart tissue lysate with SGCE antibody. Predicted molecular weight ~50 kDa.



Flow cytometry testing of human PC-3 cells with SGCE antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= SGCE antibody.



Flow cytometry testing of human A549 cells with SGCE antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= SGCE antibody.

Description

SGCE antibody detects Epsilon-sarcoglycan, a transmembrane glycoprotein encoded by the SGCE gene that is part of the dystrophin-associated glycoprotein complex (DGC) responsible for maintaining muscle cell membrane stability. The UniProt recommended name is Epsilon-sarcoglycan (SGCE). This protein belongs to the sarcoglycan family, which also includes alpha, beta, gamma, and delta isoforms, all of which assemble into a multimeric complex linking the cytoskeleton to the extracellular matrix.

Epsilon-sarcoglycan functions as a single-pass membrane protein primarily expressed in skeletal and cardiac muscle, where it associates with dystrophin, dystroglycans, and other sarcoglycans to preserve muscle integrity during contraction. Loss or mutation of SGCE disrupts the dystrophin complex and can lead to membrane fragility and progressive muscular degeneration. In addition to its structural role, Epsilon-sarcoglycan contributes to cellular signaling by facilitating communication between the cytoskeleton and the extracellular environment.

Functionally, SGCE antibody recognizes a protein that contains an extracellular domain with multiple glycosylation sites, a hydrophobic transmembrane segment, and a short cytoplasmic tail. This structure enables Epsilon-sarcoglycan to stabilize cell membranes and coordinate intracellular signaling responses. In neurons, the protein is also expressed in specific brain regions involved in motor control, suggesting a role beyond muscle physiology.

Mutations in SGCE are linked to myoclonus-dystonia syndrome (MDS), a dominantly inherited movement disorder characterized by myoclonic jerks and dystonia. The disorder arises from loss of function of the paternal SGCE allele, as the maternal copy is typically silenced by genomic imprinting. Immunohistochemical analysis using Epsilon-sarcoglycan antibody has demonstrated reduced or absent protein expression in affected individuals, making it a useful marker in research focused on dystonia and related neuromuscular disorders.

SGCE antibody is validated for use in western blotting, immunohistochemistry, and immunofluorescence applications to study dystrophin-associated protein complexes, muscle cell membrane biology, and neuronal signaling. NSJ Bioreagents provides SGCE antibody reagents optimized for research on sarcoglycan structure, dystonia pathogenesis, and membrane-cytoskeleton interactions.

Structurally, Epsilon-sarcoglycan forms part of a larger dystrophin complex that bridges the actin cytoskeleton to extracellular laminin, ensuring proper mechanical support and signal transduction in muscle cells. Research using SGCE antibody continues to advance understanding of how defects in sarcoglycan family proteins contribute to muscular and neurological disease.

Application Notes

Optimal dilution of the SGCE antibody should be determined by the researcher.

Immunogen

E. coli-derived recombinant human protein (amino acids Y38-D407) was used as the immunogen for the SGCE antibody.

Storage

After reconstitution, the SGCE antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.