Recombinant Human ε-Sarcoglycan Fc Chimera

Catalog Number: 10170-SG

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human epsilon-Sarcoglycan protein

Human epsilon-Sarcoglycan (Asp47-Phe317) Accession # O43556-1	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Asp47
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	58 kDa

SPECIFICATIONS

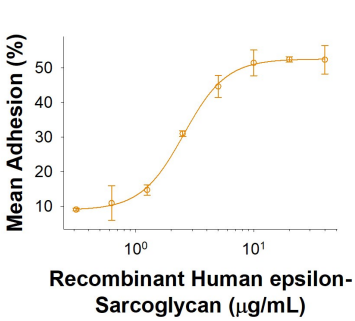
SDS-PAGE	57-71 kDa, under reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of RT4-D6P2T rat schwannoma cells. The ED_{50} for this effect is 0.8-4.8 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

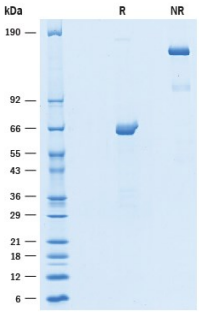
DATA

Bioactivity



Recombinant Human epsilon-Sarcoglycan Fc Chimera (Catalog # 10170-SG) supports the adhesion of RT4-D6P2T rat schwannoma cells. The ED_{50} for this effect is 0.8-4.8 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Human epsilon-Sarcoglycan Fc Chimera (Catalog # 10170-SG) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® blue staining, showing bands at 57-71 kDa and 110-140 kDa, respectively.

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BACKGROUND

SGCE, or Epsilon-Sarcoglycan, is a type 1 transmembrane glycoprotein which was found as a homologue of α-sarcoglycan (1, 2). Sarcoglycans are part of the dystrophin-associated glycoprotein complex (DGC). This multiprotein complex connects the actin cytoskeleton to the extracellular matrix in cardiac and skeletal muscles (3, 4). The sarcogylcan complex is a subcomplex within the DGC and is composed of several muscle-specific forms. α, β, γ and δ-sarcoglycans are expressed predominantly in striated and smooth muscles while ε-Sarcoglycan (SGCE) is expressed in a wide range of tissues, with the highest levels in heart and lung (1-2, 5). Mutations in the human SGCE gene have been shown to be associated with myoclonus-dystonia (6). Human SGCE is synthesized as a 437 amino acid (aa) protein that includes a 317 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 99 aa cytoplasmic domain. Within the ECD, human SGCE shares 95% and 66% aa sequence identity the mouse and rat SGCE, respectively. There are multiple isoforms of SGCE protein present in humans. SGCE exon 11b isoform is differentially expressed in the brain (1). Knockout mutations in this isoform result in psychiatric diseases (7).

References:

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