Recombinant Human LRRC52 Fc Chimera

Catalog Number: 10260-LR

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived human LRRC52 protein

Human LRRC-52 (Ser24-Asp244) Accession # Q8N7C0	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Ser24
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	52 kDa

SPECIFICATIONS

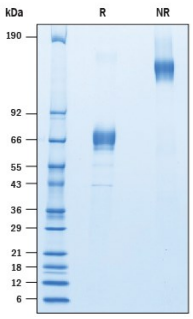
SDS-PAGE	60-80 kDa, under reducing conditions
Activity	Measured by its ability to inhibit neurite outgrowth of E16-E18 rat embryonic cortical neurons. Recombinant Human LRRC52 Fc Chimera, immobilized at 2.5 µg/mL on a 96 well plate, is able to significantly inhibit neurite outgrowth.
Endotoxin Level	<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

SDS-PAGE



2 µg/lane of Recombinant Human LRRC52 Fc Chimera (Catalog # 10260-LR) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 60-80 kDa and 120 -140 kDa, respectively.

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BACKGROUND

LRRC52 (Leucine-rich repeat-containing protein 52) belongs to an extracellular leucine-rich-repeat–only (Elron) cluster, which includes five other LRRC proteins: LRRC26, LRRC38, LRRC55, LRTM1 and LRTM2 (1). Elron cluster members are type I transmembrane proteins with an extracellular domain (ECD) containing several LRR motifs and a cytoplasmic C-terminal tail with a short stretch of acidic residues (1). The mature ECD of LRRC52 is 221 amino acids (aa), containing 5 LRR motifs, and shares 76% and 78% identity with mouse and rat LRRC52, respectively. LRRC-52 is dominantly expressed in testis and skeletal muscle and is also detected in several other tissues including placenta, kidney, lung, and some glands (2, 3). LRRC52 has been identified as a testes specific SLO3 K^+ channel accessory protein in mouse (2). LRRC52 is proposed to be essential for alkalization dependent activation of the KSper current at physiological membrane potentials and pH (2). Activation of the SLO3 channel is critical in the fertilization process and loss of function results in infertility (2, 4, 5). A second Elron cluster protein, LRRC26, was recently identified as a regulatory subunit of SLO1 BK-type K^+ channels, suggesting a general function for the entire family (6). Based on function, LRRC52 might be a therapeutic target for male contraception (7).

References:

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7. Zeng, XH. *et al.* (2015) PNAS **112**:2599.

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