Recombinant Human MDGA1 Fc Chimera

Catalog Number: 11368-MD

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived human MDGA1 protein

Human MDGA1 (Gln19-Gly931) Accession # Q8NFP4.1	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	No results obtained: Gln19 predicted
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	128 kDa

SPECIFICATIONS

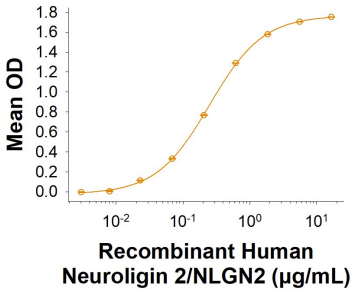
SDS-PAGE	125-145 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human MDGA1 Fc Chimera (Catalog # 11368-MD) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human Neuroligin 2/NLGN2 (Catalog # 5645-NL) binds with an ED_{50} of 0.125-1.50 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 with Trehalose. 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, -70 °C under sterile conditions after reconstitution.

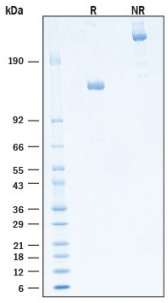
DATA

Binding Activity



Recombinant Human MDGA1 Fc Chimera Protein Binding Activity. When Recombinant Human MDGA1 Fc Chimera Protein (Catalog # 11368-MD) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human Neuroligin 2/NLGN2 (Catalog # 5645-NL) binds with an ED_{50} of 0.125-1.50 µg/mL.

SDS-PAGE



Recombinant Human MDGA1 Fc Chimera Protein SDS-PAGE. 2 µg/lane of Recombinant Human MDGA1 Fc Chimera Protein (Catalog # 11368-MD) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 125-145 kDa and 250-290 kDa, respectively.

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Catalog Number: 11368-MD

BACKGROUND

MDGA1 (MAM domain containing glycosylphosphatidylinositol anchor 1) is a 135-140 kDa glycoprotein within the IgCAM superfamily of adhesion molecules (1-3). MDGA1 is thought to mediate neuronal migration, neurite outgrowth, and cell-cell adhesion within the central and peripheral nervous system (1, 4-8). Human MDGA1 precursor is a 955 amino acid (aa) protein that produces a 914 aa mature protein with six Ig-like domains, a fibronectin type III domain (aa 640-739), a MAM domain (aa 751-918), and a GPI anchor (aa 932) (1-3). Mature human MDGA1 shares 95%, 96%, and 98% aa sequence identity with mature mouse, rat, and canine MDGA1, respectively. Potential human variants of 973, 904 and 587 aa contain a 48 aa substitution for aa 936-955, a 58 aa substitution for aa 847-955, and a 51 aa substitution for aa 537-955, respectively. Human MDGA1 also shares 54% aa sequence identity with human MDGA2, and may also share some functional redundancy (1, 4). MDGA1 is mainly expressed on restricted populations of neurons in the central and peripheral nervous system, such as embryonic neurons destined for cortical layers 2/3, migrating basilar pontine neurons and D1 interneurons of the spinal cord (1, 5-7). Deletion or down-regulation of mouse MDGA1 slows radial migration of neurons, indicating a role for MDGA1 in radial migration of cortical neurons (4, 5). MAM and Ig-like domains are involved in heterophilic and homophilic adhesion (7, 8). MDGA1 expression is also reported on primary cells and cell lines from leukemias, lymphomas, and tumors of the lung, colon, uterus, stomach and breast (3).

References:

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8. Diaz-Lopez, A. *et al.* (2011) Cancer Microenviron. **4**:23.

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