Recombinant Mouse AMIGO2 Fc Chimera

Catalog Number: 9424-AM

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived mouse AMIGO2 protein

Mouse AMIGO2 (Gly38-His392) Accession # Q80ZD9	IEGRMDP	Mouse IgG_{2a} (Glu98-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Gly38
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	67 kDa

SPECIFICATIONS

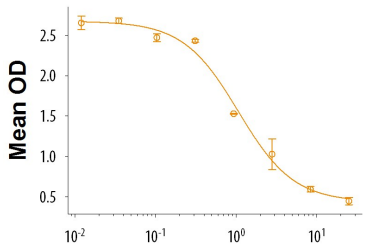
SDS-PAGE	80-92 kDa, reducing conditions
Activity	Measured by its ability to inhibit IL-2 secretion by mouse T cells in the presence of anti-CD3. The ED_{50} for this effect is 0.3-1.5 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver 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 200 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 Mouse AMIGO2 Fc Chimera (Catalog # 9424-AM) inhibits IL-2 secretion by mouse T cells in the presence of anti-CD3 antibody. The ED_{50} for this effect is 0.3-1.5 µg/mL.

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BACKGROUND

AMIGO2 (amphoterin-induced gene and ORF 2), also known as DEGA and Alivin-1, is an approximately 65 kDa transmembrane cell adhesion protein. It belongs to a family of leucine-rich repeat (LRR) containing proteins that play various roles in nervous system development and function (1, 2). Mature mouse AMIGO2 consists of a 359 amino acid (aa) extracellular domain (ECD) with six LRRs flanked by single LRRNT and LRRCT domains, followed by one immunoglobulin-like domain, a 21 aa transmembrane segment, and a 101 aa cytoplasmic domain (3-5). Within the ECD, mouse AMIGO2 shares 89% and 94% aa sequence identity with human and rat AMIGO2, respectively. AMIGO2 forms homodimers as well as heterodimers with the related AMIGO1 and AMIGO3 molecules (3, 6). Within the nervous system, AMIGO2 is transcribed in the cerebrum, hypothalamus, olfactory bulb, retina, hippocampus (pyramidal cells), and cerebellum (granule neurons and Purkinje cells) (3, 4, 7). It is also expressed in the liver, lung, testis, spleen, and small intestine (3, 4). AMIGO2 supports neuron survival, and is down-regulated following pro-apoptotic stimulation (4). Its expression can be up-regulated or down-regulated in a variety of cancers, and anti-sense knockdown of AMIGO2 interferes with tumor cell adhesion to collagen as well as *in vivo* tumorigenicity (5). AMIGO2 modulates T cell functions and its deficiency in mice ameliorates experimental autoimmune encephalomyelitis (6).

References:

1. de Wit, J. *et al.* (2011) Annu. Rev. Cell Dev. Biol. **27**:697.
2. Chen, Y. *et al.* (2006) Brain Res. Rev. **51**:265.
3. Kuja-Panula, J. *et al.* (2003) J. Cell Biol. **160**:963.
4. Ono, T. *et al.* (2003) J. Neurosci. **23**:5887.
5. Rabenau, K.E. *et al.* (2004) Oncogene **23**:056.
6. Li, Z., *et al.* (2017) Brain Behav. Immun. **62**:110.

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