Recombinant Mouse AMIGO3 Fc Chimera

Catalog Number: 9425-AM

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived

Mouse AMIGO3 (Thr20-Pro378) Accession # Q8C2S7	IEGRMDP	Mouse IgG_{2a} (Glu98-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Thr20
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	67 kDa

SPECIFICATIONS

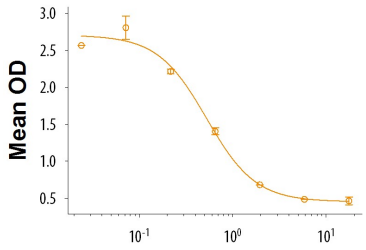
SDS-PAGE	78-91 kDa, reducing conditions
Activity	Measured by its ability to inhibit IL-2 secretion by mouse T cells in the presence of anti-CD3. The ED_{50} for this effect is 0.3-1.5 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver 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 AMIGO3 Fc Chimera (Catalog # 9425-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.

BACKGROUND

Amphoterin-Induced Gene and ORF 3 (AMIGO3), also known as Alvin-3, is a member of the AMIGO family of type I transmembrane proteins that contain 6 leucine-rich repeats (LRRs) and one Ig domain in their extracellular domains. It is ubiquitously expressed and is detected in all tissues studied (1). Mouse AMIGO3 shows less than 40% amino acid sequence homology with AMIGO1 and AMIGO2. The extracellular domain of mouse AMIGO3 shares 90% and 75% amino acid sequence identity with both that of rat and human AMIGO3, respectively. AMIGO family proteins are cell adhesion molecules that exhibit homophilic and heterophilic binding properties and are thought to play roles in neuronal axon tract development and cell adhesion. AMIGO3 mRNA and protein levels are preferentially and significantly raised in DRGN and RGC immediately after central axotomy. Depression of AMIGO3 expression correlates with dorsal column (DC) and optic nerve regeneration. AMIGO3 interacts with NgR1 and p75/TROY forming a functional receptor complex that activates RhoGTP in cells exposed to CNS myelin extracts (CME). AMIGO3 substitutes for LINGO-1 in centrally axotomized DRGN and RGC in the acute phase of injury. AMIGO3-NgR1-p75/TROY receptor complex mediates immediate axon growth inhibitory responses to CNS myelin (2). Our in-house data showed that AMIGO-3 inhibited anti-CD3 induced IL-2 secretion on $CD3^+$ cells, suggesting that AMIGO-3 may be involved in T cell activation.

References:

1. Kuja-Panula J, *et al.* (2003). J Cell Biol **160**:963.
2. Ahmed Z, *et al.* (2013) PLoS One. **16**:e61878.

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