Recombinant Mouse Angiopoietin-like Protein 8/Betatrophin Fc Chimera

Catalog Number: 9983-AN

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived mouse Angiopoietin-like Protein 8/Betatrophin protein

Mouse Betatrophin (Ala22-Ala198) Accession # Q8R1L8	IEGRMDP	Mouse IgG_{2a} (Glu98-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Ala22
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	47 kDa

SPECIFICATIONS

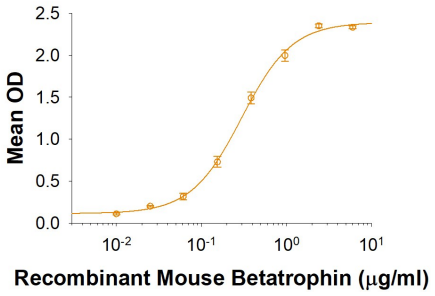
SDS-PAGE	52-56 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse Angiopoietin-like 3 (Catalog # 9899-AN) is immobilized at 1 µg/mL (100 µL/well), Recombinant Mouse Angiopoietin-like Protein 8/Betatrophin Fc Chimera binds with an ED_{50} of 0.12-0.72 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in MOPS,NaCl and CHAPS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in water.
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 °C under sterile conditions after reconstitution.

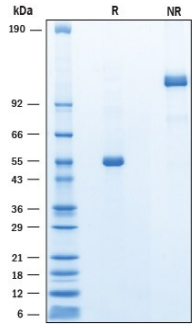
DATA

Binding Activity



When Recombinant Mouse Angiopoietin-like 3 (Catalog # 9899-AN) is immobilized at 1 µg/mL, Recombinant Mouse Betatrophin Fc Chimera (Catalog # 9983-AN) binds with an ED_{50} of 0.12-0.72 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Mouse Angiopoietin-like Protein 8/Betatrophin was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 52-56 kDa and 105-110 kDa, respectively.

BACKGROUND

Betatrophin (also called ANGPTL8, lipasin and RIPL), a novel secretory protein from liver and fatty tissues, is believed to be involved in lipid and glucose metabolism. It is most homologous to ANGPTL3 but lacks the fibrinogen-like domain of ANGPTL3 and other ANGPTL family members (1). Mouse Betatrophin is 183 amino acids (aa) in length and shares 72% aa identity with human Betatrophin. Betatrophin is a crucial modulator in lipid metabolism. It can form a complex with the N-terminal of ANGPTL3, and the complex is necessary for inhibition of LPL and triglyceride modulation (2). Betatrophin did not control beta-cell expansion in the mouse model (3). In addition to the lipid and glucose metabolism, ANGPTL8 has been reported to be involved in many other disorders (4).

References:

1. Quagliarini, F. *et al.* (2012) PNAS **109(48)**:19751.
2. Chi, X., *et al.* (2017) Molecular Metabolism **6**:1137.
3. Cox A.R. *et al.* PLoS One (2016) **11**:e0159276.
4. Luo, M. *et al.* (2018) Front Endocrino **9**:169.

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