

### DESCRIPTION

<b>Source</b>	Mouse myeloma cell line, NS0-derived mouse Angiopoietin-like Protein 8/Betatrophin protein		
	Mouse Angiopoietin-like Protein 8/Betatrophin (Ala22-Ala198) Accession # Q8R1L8	Human Fractalkine (Mucin Stalk) (Phe103-Thr338)	HHHHHH
	N-terminus		C-terminus
<b>N-terminal Sequence Analysis</b>	Ala22		
<b>Predicted Molecular Mass</b>	45 kDa		

### SPECIFICATIONS

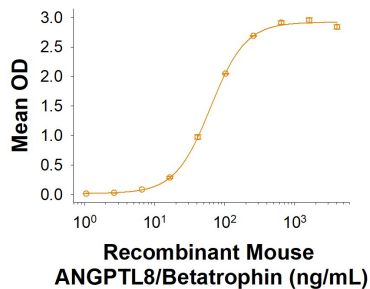
<b>SDS-PAGE</b>	74-90 kDa, under reducing conditions
<b>Activity</b>	When Recombinant Mouse Angiopoietin-like 3 (Catalog # 9899-AN) is immobilized at 0.5 µg/mL (100 µL/well), the concentration of Recombinant Mouse Angiopoietin-like Protein 8/Betatrophin Mucin stalk Chimera His-tag (Catalog # 10194-AN) that produces 50% of the optimal binding response is 12.5-100 ng/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS, NaCl and CHAPS with Trehalose. See Certificate of Analysis for details.

### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 250 µg/mL in water.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

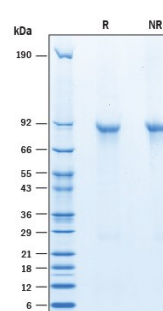
### DATA

#### Binding Activity



When Recombinant Mouse Angiopoietin-like 3 (Catalog # 9899-AN) is immobilized at 0.5 µg/mL (100 µL/well), Recombinant Mouse ANGPTL8/Betatrophin Mucin Stalk Chimera His-tag (Catalog # 10194-AN) binds with an ED<sub>50</sub> of 12.5-100 ng/mL.

#### SDS-PAGE



2 µg/lane of Recombinant Mouse ANGPTL8/Betatrophin Mucin Stalk Chimera His-tag (Catalog # 10194-AN) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 74-90 kDa.

### 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 recently identified hormone which has been associated with two functionally important processes in the development of type 2 diabetes and obesity, insulin resistance as well as being a crucial modulator in lipid metabolism through regulation of serum triglyceride levels (2, 3). Betatrophin can form a complex with the N-terminal of ANGPTL3, and this complex is necessary for inhibition of lipoprotein lipase (LPL) activity and triglyceride modulation (4). Elevated levels of circulating betatrophin in the blood may be associated with gestational diabetes mellitus (GDM) and polycystic ovary syndrome (PCOS) (5, 6). Increased levels of Betatrophin in plasma and adipose tissue may also be associated with hypertension, coronary artery disease (CAD), and peripheral artery disease (PAD) (7, 8). The role of Betatrophin in inducing pancreatic beta-cell proliferation is controversial, as it did not control beta-cell expansion in the mouse model (9, 10). In addition to the lipid and glucose metabolism, ANGPTL8 has been reported to be involved in many other disorders such as non-alcoholic fatty liver disease and renal dysfunction (11).

### References:

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