

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human Angiotensin-like Protein 8/Betatrophin protein		
	Human Angiotensin-like Protein 8/Betatrophin (Ala22-Ala198) Accession # Q6UXH0	Human Fractalkine mucin-like stalk (Phe103-Thr338) Accession # P78423	6-His tag
	N-terminus		C-terminus
N-terminal Sequence Analysis	Ala22		
Predicted Molecular Mass	45 kDa		

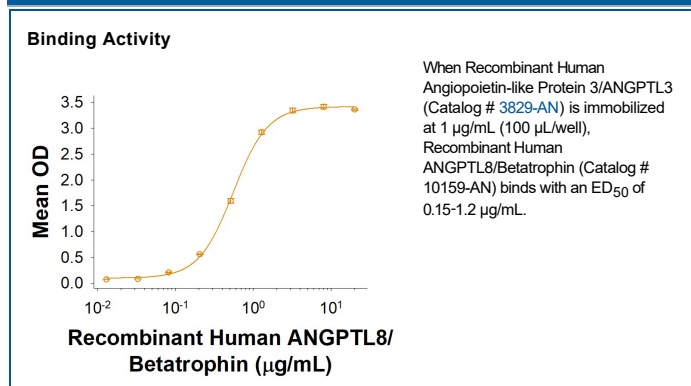
SPECIFICATIONS

SDS-PAGE	70-93 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human Angiotensin-like Protein 3/ANGPTL3 (Catalog # 3829-AN) is immobilized at 1 µg/mL (100 µL/well), the concentration of Recombinant Human Angiotensin-like Protein 8/Betatrophin that produces 50% of the optimal binding response is 0.15-1.2 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>85%, 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, NaCl and CHAPS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 400 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. <ul style="list-style-type: none"> • 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



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). Human Betatrophin is 183 amino acids (aa) in length and shares 72% aa identity with mouse Betatrophin. Betatrophin is expressed in the liver, white adipose, and brown adipose tissues. It 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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