Recombinant Human C1qTNF1

Catalog Number: 9268-TN

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Arg26-Pro281, with a C-terminal 6-His tag Accession # Q9BXJ1
N-terminal Sequence Analysis	Arg26
Predicted Molecular Mass	30 kDa

SPECIFICATIONS

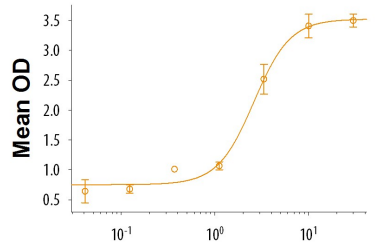
SDS-PAGE	33-41 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human BAI3 is coated at 4 µg/mL, Recombinant Human C1qTNF1 (Catalog # 9268-TN) binds with an ED_{50} = 0.6-3.6 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
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 HEPES and NaCl. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 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



When Recombinant Human BAI3 is coated at 4 µg/mL, Recombinant Human C1qTNF1 (Catalog # 9268-TN) binds with an ED_{50} of 0.6-3.6 µg/mL.

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BACKGROUND

C1qTNF1 (CTRP1) is an approximately 35 kDa member of the C1q family of secreted proteins and plays a role in energy metabolism and inflammation (1, 2). C1qTNF1 contains a collagen-like region and one C1q-like domain (3). Mature human C1qTNF1 shares 80% aa sequence identity with mouse and rat C1qTNF1. Circulating levels of C1qTNF1 are elevated in obesity, hypertension, and diabetes but can be decreased in the serum of diet-induced obese mice (4-6). C1qTNF1 expression is up-regulated in atherosclerotic plaques or adipose tissue by oxidized LDL or inflammatory cytokines (3, 7, 8). In turn, it induces the expression of inflammatory cytokines (7, 9) and the up-reglation of adhesion proteins on vascular endothelial cells (8). Systemically administered C1qTNF1, in contrast, can limit tissue damage following myocardial infarction (9). In skeletal muscle, C1qTNF1 promotes fatty acid oxidation, energy expenditure, insulin sensitivity, and glucose uptake and glycolysis (6, 10). It also induces the proliferation of immature chondrocytes (11) and aldosterone synthesis in the adrenal cortex (4). R&D Systems in-house testing indicates that C1qTNF1 binds to BAI3, consistent with the reported interactions between BAI3 and C1qL proteins (12).

References:

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