

## DESCRIPTION

<b>Source</b>	Mouse myeloma cell line, NS0-derived mouse CTRP9/C1qTNF9 protein		
	Mouse C1qTNF9 (Gln20-Ser333) Accession # Q4ZJN1	HPGGGSGGGSGGGS	HHHHHH
	N-terminus		C-terminus
<b>N-terminal Sequence Analysis</b>	No results obtained. Gln20 inferred from enzymatic pyroglutamate treatment revealing Asp21.		
<b>Predicted Molecular Mass</b>	34 kDa		

## SPECIFICATIONS

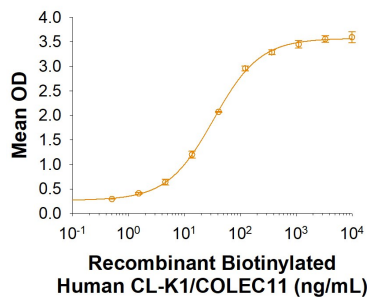
<b>SDS-PAGE</b>	39-43 kDa, reducing conditions
<b>Activity</b>	Measured by its binding ability in a functional ELISA. When Recombinant Mouse CTRP9/C1qTNF9 is immobilized at 0.5 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human CL-K1/COLEC11 that produces 50% of the optimal binding response is 15-90 ng/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, 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 HEPES and NaCl 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>

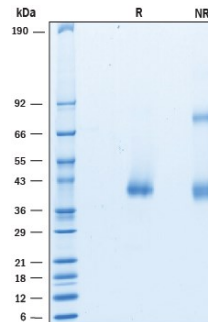
## DATA

### Binding Activity



When Recombinant Mouse CTRP9/C1qTNF9 (Catalog # 2132-TN) is coated at 0.5 µg/mL, 100 µL/well, Biotinylated Recombinant Human CL-K1/COLEC11 binds with an ED<sub>50</sub> of 15-90 ng/mL.

### SDS-PAGE



2 µg/lane of Recombinant Mouse CTRP9/C1qTNF9 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 39-43 kDa and 39-43 & 80-90 kDa, respectively.

**BACKGROUND**

C1qTNF9, also known as CTRP9, is an approximately 40 kDa member of the C1q and TNF-related protein family (1). Like all members of this protein family, C1qTNF9 consists of a short variable region, a collagenous domain that can be hydroxylated, and a C1q-like globular domain (1). Mouse C1qTNF9 shares 86% and 98% amino acid sequence identity with the human and rat orthologs, respectively. Both the mouse and human C1qTNF9 proteins are expressed mostly in adipose tissue, but the mouse protein has also been detected in the heart, lung, muscle, kidney, testis, lymph node, smooth muscle, prostate, thymus, and uterus (1, 2). C1qTNF9 has been shown to be secreted as trimers and higher order multimers and also to form hetero-oligomers with Adiponectin (1, 2). Mouse C1qTNF9 can stimulate the phosphorylation of AMPK, Akt, and eNOS (1, 3, 4). Also in mice, C1qTNF9 may have an important role in cardiac and metabolic health. Its expression has a cardioprotective effect following acute myocardial infarction that may be dependent on AMPK activation (4-6). Additionally, transgenic mice overexpressing C1qTNF9 are resistant to high fat diet-induced obesity (7). This metabolic role may be conserved, since C1qTNF9 serum levels have been shown to inversely correlate with metabolic syndrome in humans (8).

**References:**

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7. Peterson, J.M. *et al.* (2013) *Am. J. Physiol. Regul. Integr. Comp. Physiol.* **305**: R522.
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