

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived mouse CTRP4/C1qTNF4 protein
Leu17-Leu326, with a C-terminal 6-His tag
Accession # Q8R066

N-terminal Sequence Analysis Leu17

Predicted Molecular Mass 34 kDa

SPECIFICATIONS

SDS-PAGE 34-38 kDa, reducing conditions

Activity Measured by its ability to enhance neurite outgrowth of E16-E18 rat embryonic cortical neurons.
Recombinant Mouse CTRP4/C1qTNF4, immobilized at 2.5-5 µg/mL on a 96-well plate, is able to significantly enhance neurite outgrowth.

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 HEPES and NaCl with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

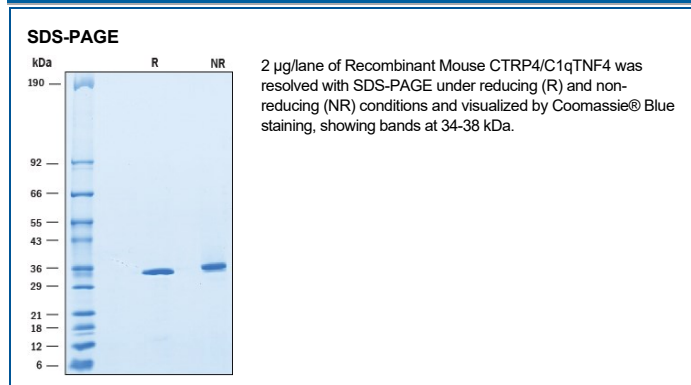
Reconstitution Reconstitute at 500 µg/mL in water.

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.
- 2 weeks, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, ≤ -20 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

C1qTNF4, also known as CTRP4, is an approximately 34 kDa member of the C1q family of secreted proteins (1, 2). C1qTNF4 consists of a signal peptide followed by two tandem globular C1q domains (1). It is the only C1q family member with tandem C1q domains (1, 2). The second C1q domain contains an RGD peptide, suggesting that it could potentially interact with integrins (3). Mature mouse C1qTNF4 shares 95% and 98% amino acid sequence identity with human and rat C1qTNF4, respectively. Expression of human C1qTNF4 occurs most abundantly in brain and adipose tissue (1). Neurons in the hypothalamus express and secrete CTRP4 which modulates food intake and energy balance by controlling neuropeptide gene expression (1). In-house finding shows CTRP4 can support neurite outgrowth of cortical neurons. Like other CTRP family members, C1qTNF4 can form dimers, trimers, hexamers, and high molecular weight oligomers following secretion (1, 4). Injection of recombinant C1qTNF4 into mice can reduce food intake, body weight, and ambulatory activity levels (1). C1qTNF4 has also been shown to promote human cancer cell survival *in vitro* (5).

References:

1. Byerly, M.S. *et al.* (2014) *J. Biol. Chem.* **289**:4055.
2. Kishore, U. *et al.* (2004) *Trends Immunol.* **25**:551.
3. Ruoslahti, E. (1996) *Annu. Rev. Cell Dev. Biol.* **12**:697.
4. Wong, G.W. *et al.* (2008) *Biochem. J.* **416**:161.
5. Li, Q. *et al.* (2011) *Cancer Lett.* **308**:203.