

DESCRIPTION

Source *E. coli*-derived
Phe154-Asp287, with an N-terminal Met and 6-His tag
Accession # Q7Z5L3

N-terminal Sequence Analysis Met

Structure / Form Noncovalently-linked homotrimer

Predicted Molecular Mass 16 kDa

SPECIFICATIONS

SDS-PAGE 14 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human C1qTNF10/C1qL2 is immobilized at 2 µg/mL, 100 µL/well, the concentration of Recombinant Human BAI2 Protein Fc Chimera (Catalog # 9338-BA) that produces 50% of the optimal binding response is approximately 0.075-0.45 µg/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >70%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in Tris, NaCl, TCEP and Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

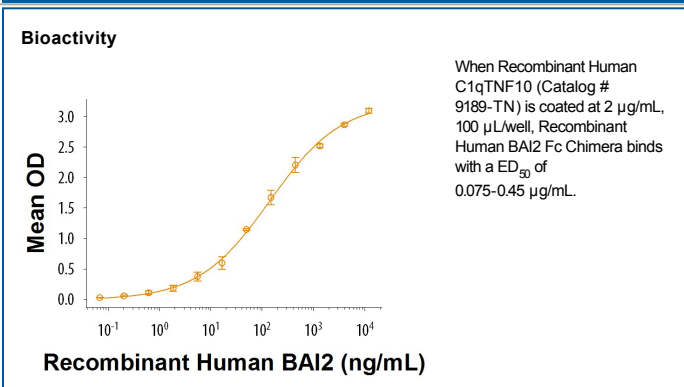
Reconstitution Reconstitute at 500 µg/mL in water.

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.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA



BACKGROUND

C1qTNF10 (CTRP10), also known as C1qL2, is an approximately 30 kDa member of the C1q family of secreted proteins (1, 2). Mature human C1qTNF10 contains a collagen-like region and one C1q-like domain. It can form heterotrimers and higher order disulfide linked oligomers with C1qTNF1, C1qTNF11/C1qL4, and C1qTNF13/C1qL3 (3-6). Within the C1q-like domain, human C1qTNF10 shares 100% aa sequence identity with mouse and rat C1qTNF10. Similarly to C1qTNF11, C1qTNF13, and C1qTNF14/C1qL1, C1qTNF10 binds to BAI3 in the cerebral cortex and on cerebellar Purkinje cells (7). It is produced by mossy fibers in the hippocampus where it enhances the postsynaptic clustering of kainate-type glutamate receptors (KAR) on CA3 pyramidal neurons (8). This function is enhanced by the binding of C1qTNF10 to the KAR subunits GluK2 and GluK4 as well as to Neurexin-3 beta containing the exon 5b splice site insertion (8).

References:

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2. Yuzaki, M. (2001) *Eur. J. Neurosci.* **32**:191.
3. Peterson, J.M. *et al.* (2009) *Biochem. Biophys. Res. Commun.* **388**:360.
4. Wei, Z. *et al.* (2011) *J. Biol. Chem.* **286**:15652.
5. Wei, Z. *et al.* (2013) *J. Biol. Chem.* **288**:10214.
6. Wong, G.W. *et al.* (2008) *Biochem. J.* **416**:161.
7. Bolliger, M.F. *et al.* (2011) *Proc. Natl. Acad. Sci. USA* **108**:2534.
8. Matsuda, K. *et al.* (2016) *Neuron* **90**:752.