Recombinant Human C1qL4

Catalog Number: 9758-TN

DESCRIPTION

Source	*E. coli*-derived human C1qL4 protein Gly105-Asp238, with an N-terminal Met and 6-His tag Accession # Q86Z23
N-terminal Sequence Analysis	Met
Predicted Molecular Mass	16 kDa

SPECIFICATIONS

SDS-PAGE	13 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human C1qL4 is immobilized at 2 µg/mL, 100 µL/well, the concentration of Recombinant Human BAI2 Fc Chimera (Catalog # 9338-BA) that produces 50% of the optimal binding response is 2-10 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 Tris, NaCl and TCEP with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in water.
Shipping	The product is shipped with polar packs. 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.

BACKGROUND

C1qTNF11 (CTRP11), also known as C1qL4, is an approximately 29 kDa member of the C1qTNF family of secreted proteins (1, 2). Mature human C1qTNF11/C1qL4 contains two distinct domains: a collagen-like region and one C1q-like domain, and can form disulfide-linked heteromers with C1qTNF14/C1qL1 (3, 4). The C1qTNF11/C1qL4 gene is conserved in human, chimpanzee, dog, mouse, rat, zebrafish, and frog. Within the C1q-like domain, human C1qTNF11/C1qL4 shares 100% amino acid (aa) sequence identity with that of mouse, monkey and rat. C1qTNF11/C1qL4 is expressed predominantly in testis and adipocytes, and also at a lower level in skeletal muscle and kidney (4), hippocampus, and cerebral cortex (5). Similar to C1qTNF13/C1qL3, C1qTNF10/C1qL2, and C1qTNF14/C1qL1, C1qTNF11/C1qL4 binds to BAI3 in the cerebral cortex and on cerebellar Purkinje cells (5-8). C1qTNF11/C1qL4 binding to BAI3 induces the formation and maintenance of excitatory synapses between climbing fibers and parallel fibers with Purkinje cells (5, 7). Our in house assay shows that C1qTNF11/C1qL4 also binds to BAI-2. In addition, C1qTNF11/C1qL4 has been reported to promote angiogenesis via activation of the ERK pathway in HUVEC cells mediated by BAI3 (9). Conversely, in adipocytes, C1qTNF11/C1qL4 treatment decreased ERK1/2 signaling and inhibited adipogenesis (4).

References:

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