

C1QB Protein, Human, Recombinant (His)

General Information

Synonyms:	complement component 1, q subcomponent, B chain;C1QB
Protein Construction:	A DNA sequence encoding the human C1QB (NP_000482.3) precursor (Met 1-Ala 253) was expressed, with a carboxy-terminal polyhistidine tag. Predicted N terminal: Gln 28
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P02746
Molecular Weight:	25.2 kDa (predicted); 30 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 100 mM NaCl, 10% Glycerol, 0.5 mM TCEP, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:
It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:
In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Complement Component 1, q subcomponent (C1q) associates with C1r and C1s in order to yield the first component of the serum complement system. Deficiency of C1q has been associated with lupus erythematosus and glomerulonephritis. C1q is composed of 18 polypeptide chains: six A-chains, six B-chains, and six C-chains. Southern blot analysis of chromosomal DNA from vertebrate species demonstrated highest similarity between the C1qB genes, followed by C1qC and finally C1qA. Sequence comparison of C1q from three different species have

shown that the B chains have the strongest similarity. C1q was already present at embryonic day 14 (E14) and showed little change in abundance through six weeks postnatal. At E16, C1qB mRNA was present at high abundance in putative microglia/macrophages in cortical marginal and intermediate zones, and hippocampal analge.

Reference

- Pasinetti GM,et al.(1992) Complement C1qB and C4 mRNAs responses to lesioning in rat brain. *Experimental neurology*. 118(2): 117-25.
- Johnson SA,et al.(1994) Expression of complement C1qB and C4 mRNAs during rat brain development. *Brain Res Dev Brain Res*. 80(1-2): 163-74.
- Grewal RP,et al.(1999) C1qB and clusterin mRNA increase in association with neurodegeneration in sporadic amyotrophic lateral sclerosis. *Neuroscience letters*. 271(1): 65-7.
- Spielman L,et al.(2002) Induction of the complement component C1qB in brain of transgenic mice with neuronal overexpression of human cyclooxygenase-2. *Acta neuropathologica*. 103(2): 157-62.

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