

C1q

The complement component 1q (or simply C1q) is a [protein](#) complex involved in the [complement system](#), which is part of the innate [immune system](#). C1q together with C1r and C1s form the C1 complex.

Antibodies of the adaptive immune system can bind antigen, forming an antigen-antibody complex. When C1q binds antigen-antibody complexes, the C1 complex becomes activated. Activation of the C1 complex initiates the classical complement pathway of the complement system. The antibodies IgM and all IgG subclasses except IgG4 are able to initiate the complement system.

[C1qtnf9](#), an agonist of adiponectin receptor 1 (AdipoR1), has recently been shown to reduce inflammatory responses in systemic diseases.

Complement C1q has an inhibitory effect on the formation of left ventricular hypertrophy, which may not be mediated by regulating lipid metabolism. During cardiac surgery, complement C1q may have a protective effect against myocardial injury ¹⁾.

¹⁾

Chen L, Duan HZ, Zhang C, Li G, Wu YT, Wang D, Li XY. Serum complement C1q level is associated with left ventricular hypertrophy induced by coarctation of the aorta: A retrospective observational study. BMC Cardiovasc Disord. 2022 Aug 10;22(1):367. doi: 10.1186/s12872-022-02807-2. PMID: 35948870.

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