

C1r (H-126): sc-99195

BACKGROUND

The complement component proteins, C1, C3, C4, and C5, are potent anaphylatoxins that are released during complement activation. Binding of these proteins to their respective G protein-coupled receptors induces proinflammatory events, such as cellular degranulation, smooth muscle contraction, arachidonic acid metabolism, cytokine release, leukocyte activation, and cellular chemotaxis. C1q, together with proenzymes C1r and C1s, yield C1, the first component of the classical pathways of the serum complement system. C1 consists of a calcium dependent trimolecular complex of C1r, C1s and C1q in a 2:2:1 ratio. C1r is a dimer formed of two identical chains that are activated by cleavage into two chains, A and B.

REFERENCES

1. Nothen, M.M., et al. 1994. A common amino acid polymorphism in complement component C1r. *Hum. Mol. Genet.* 3: 217.
2. Pelloux, S., et al. 1996. Identification of a cryptic protein kinase CK2 phosphorylation site in human complement protease C1r, and its use to probe intramolecular interaction. *FEBS Lett.* 386: 15-20.
3. Budayova-Spano, M., et al. 2002. Monomeric structures of the zymogen and active catalytic domain of complement protease C1r: further insights into the C1 activation mechanism. *Structure* 10: 1509-1519.
4. Budayova-Spano, M., et al. 2002. The crystal structure of the zymogen catalytic domain of complement protease C1r reveals that a disruptive mechanical stress is required to trigger activation of the C1 complex. *EMBO J.* 21: 231-239.
5. Grevink, M.E., et al. 2005. Levels of complement in sera from inactive SLE patients, although decreased, do not influence *in vitro* uptake of apoptotic cells. *J. Autoimmun.* 24: 329-336.

CHROMOSOMAL LOCATION

Genetic locus: C1R (human) mapping to 12p13.31; C1ra/C1rb (mouse) mapping to 6 F2.

SOURCE

C1r (H-126) is a rabbit polyclonal antibody raised against amino acids 188-313 mapping within an internal region of C1r of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

C1r (H-126) is recommended for detection of mature C1r, C1r heavy chain and C1r precursor of human and rat origin and C1ra and C1rb of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with C1r light chain.

C1r (H-126) is also recommended for detection of mature C1r, C1r heavy chain and C1r precursor in additional species, including equine and canine.

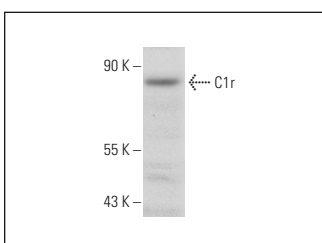
Molecular Weight of C1r: 80 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



C1r (H-126): sc-99195. Western blot analysis of C1r expression in MOLT-4 whole cell lysate.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS
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Try **C1r (F-7): sc-514105** or **C1r (F-1): sc-271642**, our highly recommended monoclonal alternatives to C1r (H-126).