

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects mouse Complement Component C1ra in ELISAs. In direct ELISAs, no cross-reactivity with recombinant human C1ra is observed.                                                                                                                                           |
| <b>Source</b>             | Monoclonal Rat IgG <sub>2A</sub> Clone # 870332                                                                                                                                                                                                                             |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse Complement Component C1ra<br>Ser17-Asn707<br>Accession # Q8CG16                                                                                                                                                       |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

C1ra (complement component 1 subcomponent r-A) is an 85-95 kDa member of the peptidase S1 family of enzymes. It is secreted primarily by hepatocytes but is also known to be expressed by monocytes, fibroblasts, keratinocytes and endothelial cells. C1r forms a key component of the complement 1 complex. Complement is a general name for a group of molecules that "complement" the antimicrobial effort associated with antibodies and phagocytic cells. The C1 complex is composed of five proteins; one C1q that binds immunoglobulin, and two copies of two inactive serine proteases termed C1r and C1s. Activation of the C1 complex is the first step in a proteolytic cascade that generates multiple modulators involved in cell lysis and phagocytosis. Following C1q binding, each 85-90 kDa C1r monomer undergoes autocleavage to generate a 60 kDa and 28-34 kDa disulfide-linked enzymatically-active heterodimer. Each C1r heterodimer now acts on a C1s counterpart to create a globally-active complex that drives the complement cascade. In contrast to human, the mouse genes for C1r and C1s have undergone duplication. The major, or liver derived, C1r is termed C1ra, while a prostate-associated C1r is called C1rB. Mouse C1ra proenzyme is 691 amino acids (aa) in length (aa 17-707). It contains one CUB domain (aa 17-140), an EGF-like motif (aa 141-189), a second CUB domain (aa 192-303), two SUSHI (or CCP) repeats (aa 306-448), and a C-terminal peptidase S1 region (aa 463-704). Autocleavage occurs between Arg462:Ile463, generating a 60 kDa N-terminal subunit that is disulfide-linked to a 30 kDa enzymatic subunit. Over aa 17-707, mouse C1ra shares 91% and 82% aa sequence identity with rat and human C1r, respectively. Full-length mouse C1ra shares 96% aa sequence identity with mouse C1rB, with virtually all differences arising in the enzymatic, or small subunit.

## PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.