Mouse Complement Component C1ra Alexa Fluor® 647-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF7160R
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Complement Component C1ra in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant human C1r is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Complement Component C1ra Ser17-Asn707 Accession # AAH04637
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	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 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) (SwissProt #: Q8CG16). 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.

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