

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Complement Component C1r in Western blots. In Western blots, less than 2% cross-reactivity with recombinant human Complement Component C1s is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Complement Component C1r Ser18-Asp705 Accession # NP_001724
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

## 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human Complement Component C1r (Catalog # 1807-SE)

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

The classical complement pathway plays a major role in innate immunity against infection. This pathway is triggered by C1, a multimolecular complex composed of the recognition protein C1q and two serine proteases, C1r and C1s. Following the C1q recognition, C1r is autoactivated, and in turn activates C1s, which cleaves C4 and C2, the C1 substrates (1). Both C1r and C1s activation involve cleavage of a specific Arg-Ile bond, converting single-chain proenzymes into active proteases of disulfide bond-linked chains (A and B) (2). The A chains contain multiple domains in the order of CUB1-EGF-CUB2-CCP1-CCP2-Activation Peptide. The B chains contain the serine protease catalytic domain. The full-length (amino acid residues 1-705) of human C1r was expressed, which had the Leu152 natural variant (3). The purified protein corresponded to the processed active form, with A and B chains starting at residue Ser18 and Ile464, respectively.

### References:

1. Arlaud, G.J. *et al.* (2002) *Biochem. Soc. Trans.* **30**:1001.
2. Lacroix, M. *et al.* (2001) *J. Biol. Chem.* **276**:36233.
3. Journet A. and M. Tosi (1986) *Biochem. J.* **240**:783.