

For Research Use Only

# Recombinant Mouse Complement factor I protein (rFc Tag)



Catalog Number: Eg2685

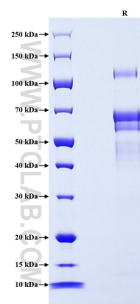
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |                 |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------|
| Basic Information        | Species:<br>Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Purity:<br>>90 %, SDS-PAGE | Tag:<br>rFc Tag |
| Technical Specifications | <p><b>Purity:</b><br/>&gt;90 %, SDS-PAGE</p> <p><b>Endotoxin Level:</b><br/>&lt;0.1 EU/µg protein, LAL method</p> <p><b>Source:</b><br/>HEK293-derived Mouse Complement factor I protein Arg19-Val603 (Accession# Q61129) with a rabbit IgG Fc tag at the C-terminus.</p> <p><b>GeneID:</b><br/>12630</p> <p><b>Accession:</b><br/>Q61129</p> <p><b>Predicted Molecular Mass:</b><br/>91.3 kDa</p> <p><b>SDS-PAGE:</b><br/>40-50 kDa, 55-70 kDa and 110-120 kDa, reducing (R) conditions</p> <p><b>Formulation:</b><br/>Lyophilized from 0.22 µm filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                            |                 |
| Biological Activity      | Not tested                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |                 |
| Storage and Shipping     | <p><b>Storage:</b><br/>It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"><li>• Until expiry date, -20°C to -80°C as lyophilized proteins.</li><li>• 3 months, -20°C to -80°C under sterile conditions after reconstitution.</li></ul> <p><b>Shipping:</b><br/>The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |                 |
| Reconstitution           | Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                            |                 |
| Background               | <p>Complement factor I (FI) is the nexus for classical, lectin and alternative pathway complement regulation. FI is produced and secreted predominantly and constitutively by hepatocytes (PMID: 11532284). FI is an 88 kDa plasma protein that circulates in an inactive configuration until it forms a trimolecular complex with its cofactor and substrate whereupon a structural reorganization allows the catalytic triad to cleave its substrates, C3b and C4b. In keeping with its role as the master complement regulatory enzyme, deficiency has been linked to immunopathology. In the setting of complete FI deficiency, a consumptive C3 deficiency results in recurrent infections with encapsulated microorganisms. Aseptic cerebral inflammation and vasculitic presentations are also less commonly observed. Heterozygous mutations in the factor I gene (CFI) have been demonstrated to be enriched in atypical haemolytic uraemic syndrome, albeit with a very low penetrance. Haploinsufficiency of CFI has also been associated with decreased retinal thickness and is a strong risk factor for the development of age-related macular degeneration (PMID: 37478687).</p> |                            |                 |
| References               | <ol style="list-style-type: none"><li>1. Schlaf G. et al. (2021). Mol Immunol. 38(2-3):231-9.</li><li>2. Hallam TM. et al. (2023). Immunobiology. 228(5):152410.</li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |                 |
| Synonyms                 | C3B/C4B inactivator, Cfi, Complement factor I, Complement factor I heavy chain, Complement factor I light chain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |                 |

## For technical support and original validation data for this product please contact

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## Selected Validation Data



Purity of Recombinant Mouse Complement factor I was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) conditions and stained using Coomassie blue.