

## CD59 Protein, Human, Recombinant (His)

### General Information

Synonyms:	MIN2;MAC-IP;G344;EL32;FLJ92039;HRF-20;EJ30;HRF20;MSK21;MGC2354;MIRL;16.3A5;MIN3;FLJ38134;MACIF;CD59 molecule;p18-20;MIC11;MEM43;EJ16;MIN1;1F5
Protein Construction:	A DNA sequence encoding the mature form of human CD59 (P13987-1) (Met 1-Glu 101) without the pro peptide was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Leu 26
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P13987-1
Molecular Weight:	10.2 kDa (predicted); 13-19 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

CD59 glycoprotein, also known as 2 kDa homologous restriction factor, HRF2, MAC-inhibitory protein, Membrane attack complex inhibition factor, Membrane inhibitor of reactive lysis, MIC11, MIRL and CD59, is a cell membrane protein which contains one UPAR/Ly6 domain. CD59 is a small, highly glycosylated, GPI-linked protein, with a wide

expression profile. The soluble form of CD59 from urine retains its specific complement binding activity, but exhibits greatly reduced ability to inhibit MAC assembly on cell membranes. CD59 is a potent inhibitor of the complement membrane attack complex (MAC) action. CD59 was first identified as a regulator of the terminal pathway of complement. It acts by binding to the C8 and/or C9 complements of the assembling MAC, thereby preventing incorporation of the multiple copies of C9 required for complete formation of the osmolytic pore. This inhibitor appears to be species-specific. CD59 is involved in signal transduction for T-cell activation complexed to a protein tyrosine kinase. Defects in CD59 are the cause of CD59 deficiency (CD59D).

### Reference

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