

# **Screening Libraries**

**Proteins** 

# **Product** Data Sheet

# Complement C5/C5a Protein, Mouse (Biotinylated)

Cat. No.: HY-P77540

Synonyms: Complement C5; Hemolytic Complement; C5a

Species: Source: E. coli

Accession: P06684 (N679-R755)

Gene ID: 15139

Molecular Weight: Approximately 9 kDa.

| PROPER' | TIE   |
|---------|-------|
| PRUPER  | 11115 |

| Appearance          | Lyophilized powder.  |
|---------------------|--|
| Formulation         | Lyophilized from a 0.2 $\mu$ m filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.                                 |
| Endotoxin Level     | <1 EU/µg, determined by LAL method.  |
| Reconsititution     | It is not recommended to reconstitute to a concentration less than 100 $\mu g/mL$ in ddH $_2$ O.   |
| Storage & Stability | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |
| Shipping            | Room temperature in continental US; may vary elsewhere.  |

# **DESCRIPTION**

## Background

Complement C5/C5a Protein, when activated by a C5 convertase, triggers the spontaneous assembly of the late complement components into the membrane attack complex, C5-C9. C5b forms a transient binding site for C6, forming the foundation for the assembly of the lytic complex. Meanwhile, C5a, produced through proteolytic degradation of complement C5, acts as an anaphylatoxin mediating local inflammatory processes. Its binding to the receptor C5AR1 induces various responses such as intracellular calcium release, smooth muscle contraction, increased vascular permeability, and histamine release from mast cells and basophilic leukocytes. Additionally, C5a acts as a potent chemokine, stimulating the movement of polymorphonuclear leukocytes and guiding their migration towards inflamed areas.

Caution: Product has not been fully validated for medical applications. For research use only.

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Page 1 of 1