



# Recombinant Protein Technical Manual

## Recombinant Mouse Complement Component C3a/C3a Protein RPES0143

### Product Data:

**Product SKU:** RPES0143

**Size:** 10µg

**Species:** Mouse

**Expression host:** E. coli

**Uniprot:** P01027

### Protein Information:

**Molecular Mass:** 9.2 kDa

**AP Molecular Mass:** 9 kDa

**Tag:**

**Bio-activity:**

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4.

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Complement Component C3a; Anaphylatoxin; C3a

## Immunogen Information:

**Sequence:** Ser671-Arg748

## Background:

Complement is defined as key part of innate immunity and as the first line of defense in the fight against invading pathogens. Complement 3 (C3) is the most abundant component of the complement cascade and the convergent point for all three major complement activation pathways: namely classical, alternative and mannose-binding lectin pathways. Complement activation leads to the formation of the C3 convertase, which cleaves C3 into the key effector molecules, C3a (anaphylatoxin) and C3b (opsonin) which then drive microbe removal. By binding to C3a receptor (C3aR), C3a exhibits potent anaphylatoxin activity, including increased vascular permeability, triggering degranulation of mast cells, inflammation, and activating leukocytes.