

### Source

Human IgG4 Kappa Isotype Control (mAb) is a chimeric monoclonal antibody recombinantly expressed from human 293 cells (HEK293), which combines the variable region of a mouse monoclonal antibody with human IgG4 constant domain. The mouse monoclonal antibody is produced from a hybridoma resulting from fusion of SP2/0 myeloma and B-lymphocytes obtained from a mouse immunized with DNP.

### Isotype

Human IgG4/kappa

### Specificity

This product is a specific antibody against DNP.

### Application

This antibody is suitable for use as a non-targeting isotype control in various in vitro and in vivo studies. It can also be used as a negative control in various applications such as ELISA, Western blot, immunofluorescence, immunohistochemistry, immunoprecipitation, and flow cytometry. Each laboratory should determine an optimum working titer for use in its particular application.

### Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

### Endotoxin

Less than 0.1 EU per  $\mu\text{g}$  by the LAL method.

### Sterility

The sterility testing was performed by membrane filtration method.

### Formulation

Lyophilized from 0.22  $\mu\text{m}$  filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

25 mg or larger size will be supplied as liquid and shipped by dry ice. Please inquire the dry ice shipping cost.

### Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

### Storage

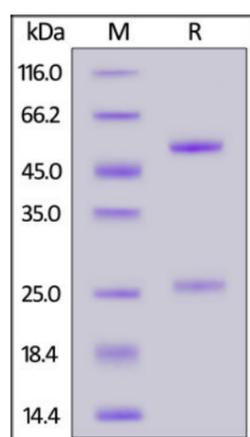
For long term storage, the product should be stored at lyophilized state at  $-20^{\circ}\text{C}$  or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- $-20^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$  for 12 months in lyophilized state;
- $-70^{\circ}\text{C}$  for 3 months under sterile conditions after reconstitution.

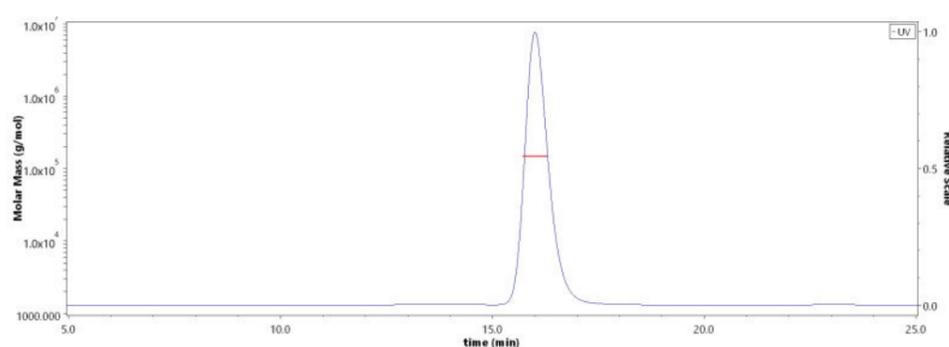
### SDS-PAGE



Human IgG4 Kappa Isotype Control (mAb) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

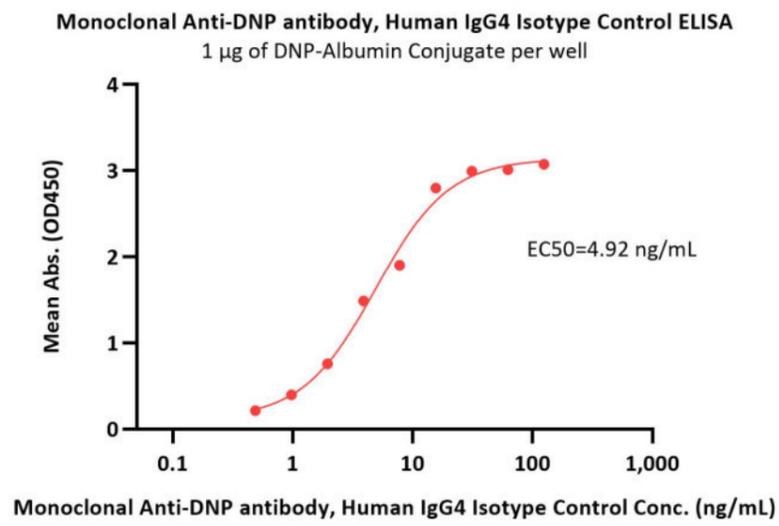
### Bioactivity-Elisa

### SEC-MALS



The purity of Human IgG4 Kappa Isotype Control (mAb) (Cat. No. DNP-M3) is more than 90% and the molecular weight of this protein is around 135-155 kDa verified by SEC-MALS.

[Report](#)



Immobilized DNP-Albumin Conjugate at 10  $\mu$ g/mL (100  $\mu$ L/well) can bind Human IgG4 Kappa Isotype Control (mAb) (Cat. No. DNP-M3) with a linear range of 1-15 ng/mL (QC tested).

## Background

A hapten is a small molecule that can elicit an immune response only when conjugated with a large carrier such as a protein. Typical haptens include drugs, urushiol, quinone, steroids, etc. Peptides and non-protein antigens usually need conjugating to a carrier protein (such as BSA (bovine serum albumin) or KLH (keyhole limpet hemocyanin) to become good immunogens). Additionally, haptens should be administered with an adjuvant to ensure a high quality immune response. It is important that the hapten design (preserving greatly the chemical structure and spatial conformation of target compound), selection of the appropriate carrier protein and the conjugation method are key conditions for the desired specificity anti-hapten antibodies. We design anti-hapten antibodies based on the HaptenDB information.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.