

Datasheet: HCA195

BATCH NUMBER 171946

Description:	RECOMBINANT HUMAN IgG4 KAPPA
Name:	HUMAN IgG4 KAPPA
Format:	Purified
Product Type:	Recombinant Protein
Clone:	AbD18705_hlgG4
Isotype:	IgG4 Kappa
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
ELISA	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Product Form	Human IgG4 antibody selected from the HuCAL phage display library and expressed in a human cell line. This antibody is supplied as a liquid.
Preparation	Purified IgG prepared by affinity chromatography on Protein A
Source	HKB-11
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Approx. Protein Concentrations	Antibody concentration 0.5 mg/ml
Immunogen	Green fluorescent protein.

**External Database
Links**

UniProt:

[P01834](#) [Related reagents](#)
[P01861](#) [Related reagents](#)

Entrez Gene:

[3514](#) IGKC [Related reagents](#)
[3503](#) IGHG4 [Related reagents](#)

Specificity

Recombinant Human IgG4 kappa, AbD18705_hlgG4 is a recombinant human IgG4 antibody with a kappa light chain.

AbD18705_hlgG4 is specific for green fluorescent protein (GFP) and has no known reactivity with mammalian proteins or other antigens. This product is recommended for use as a standard in assays designed to measure IgG4 levels, or as a control antibody when using other human antibodies of the same isotype and subclass.

In addition to the tetrameric IgG structure, composed of two copies each of the heavy and light chains, human IgG4 forms so-called half-molecules. This species contains only one heavy and one light chain. Half-molecules can assemble with an unrelated half-molecule to form bispecific tetrameric antibody species ([Aalberse *et al.* 2002](#)). Half-molecules of human IgG4 preparations can be detected as an additional species under denaturing, non-reducing conditions using SDS-PAGE, size exclusion chromatography or capillary electrophoresis.

Mutation in the core hinge region of IgG4 prevents the formation of half-molecules ([Bloom *et al.* 1997](#)). In addition to the wild type recombinant, Bio-Rad also offers recombinant Human IgG4 kappa in its mutated form ([HCA247](#)). Recombinant Human IgG4 lambda is also available in both wild type ([HCA050](#)) and mutant form ([HCA246](#)).

References

1. Beffinger, M. *et al.* (2025) FcRn-silencing of IL-12Fc prevents toxicity of local IL-12 therapy and prolongs survival in experimental glioblastoma. [Nat Commun. 16 \(1\): 4751.](#)

Storage

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee

12 months from date of despatch

Acknowledgements

This product and/or its use is covered by claims of U.S. patents, and/or pending U.S. and non-U.S. patent applications owned by or under license to Bio-Rad Laboratories, Inc. See [bio-rad.com/en-us/trademarks](#) for details.

**Health And Safety
Information**

Material Safety Datasheet documentation #10040 available at:
<https://www.bio-rad-antibodies.com/SDS/HCA195>

Licensed Use	For <i>in vitro</i> research purposes only, unless otherwise specified in writing by Bio-Rad.
Regulatory	For research purposes only
Technical Advice	Recommended protocols and further information about HuCAL recombinant antibody technology can be found in the HuCAL Antibodies Technical Manual .

Related Products

Recommended Useful Reagents

[RECOMBINANT HUMAN IgG4 LAMBDA \(HCA050\)](#)

[RECOMBINANT HUMAN IgG4 LAMBDA \(MUTANT\) \(HCA246\)](#)

[RECOMBINANT HUMAN IgG4 KAPPA \(MUTANT\) \(HCA247\)](#)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M428342:240301'

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