

## CD4 mAb (GK1.5), InVivoPure+

Endotoxin level  $\leq 1$  EU/mg

### Description:

**The CD4 monoclonal antibody (clone GK 1.5) was purified from supernatant of TIB-207™ GK1.5 from the ATCC.\***

The GK1.5 monoclonal antibody reacts with the mouse CD4 molecule, a 55 kDa cell surface receptor expressed by a majority of thymocytes, subpopulation of mature T cells and dendritic cells. CD4 binds to MHC class II on the surface of antigen presenting cells and plays an important role both in T cell development and in optimal functioning of mature T cells. In T cells, CD4 associates with protein tyrosine kinase p56lck through its cytoplasmic tail. Binding of GK1.5 is blocked using the RM4-5 antibody by competing with GK1.5 for the same binding site on the CD4 molecule. GK1.5 significantly enhanced the percentages of peripheral CD4<sup>+</sup>CD25<sup>+</sup>Foxp3<sup>+</sup> Treg cells in CD4<sup>+</sup> T cells in mice without altering their immunosuppressive function [1].

The antibody profoundly blocks antigen specific murine class II MHC antigen reactive helper T lymphocyte lines [2].

This antibody is produced exclusively under serum-free conditions from hybridoma and purified with Protein-A or Protein-G affinity chromatography.

<b>Product-ID:</b>	<b>AK3602P+</b>
<b>Clone:</b>	GK1.5
<b>Immunogen:</b>	Animals were immunized with the cloned cytotoxic T lymphocyte lines V4 and 243/2.5. L3T4 is expressed on mouse helper/inducer T cells and is analogous to the human Leu-3/T4 molecule.
<b>Host:</b>	Rat
<b>Clonality:</b>	Monoclonal
<b>Isotype:</b>	IgG2b $\kappa$
<b>Formulation:</b>	Clear Liquid, PBS, pH 7.4, 0.2 $\mu$ m sterile filtered
<b>Concentration:</b>	$\geq 1$ mg/mL
<b>Purity:</b>	$\geq 95$ % (CGE, reducing conditions) $\leq 5$ % aggregates (analytical SEC)
<b>Endotoxin:</b>	$\leq 1$ EU/mg (LAL test)
<b>Storage:</b>	2 - 8 °C
<b>Recommended Isotype Control:</b>	Rat IgG2b Isotype Control (AK3616P+)

## PRODUCT INFORMATION



**The product is for research use only and not for use in diagnostic or therapeutic procedures.**

**\*The ATCC trademark and trade name and any and all ATCC catalog numbers are trademarks of the American Type Culture Collection.**

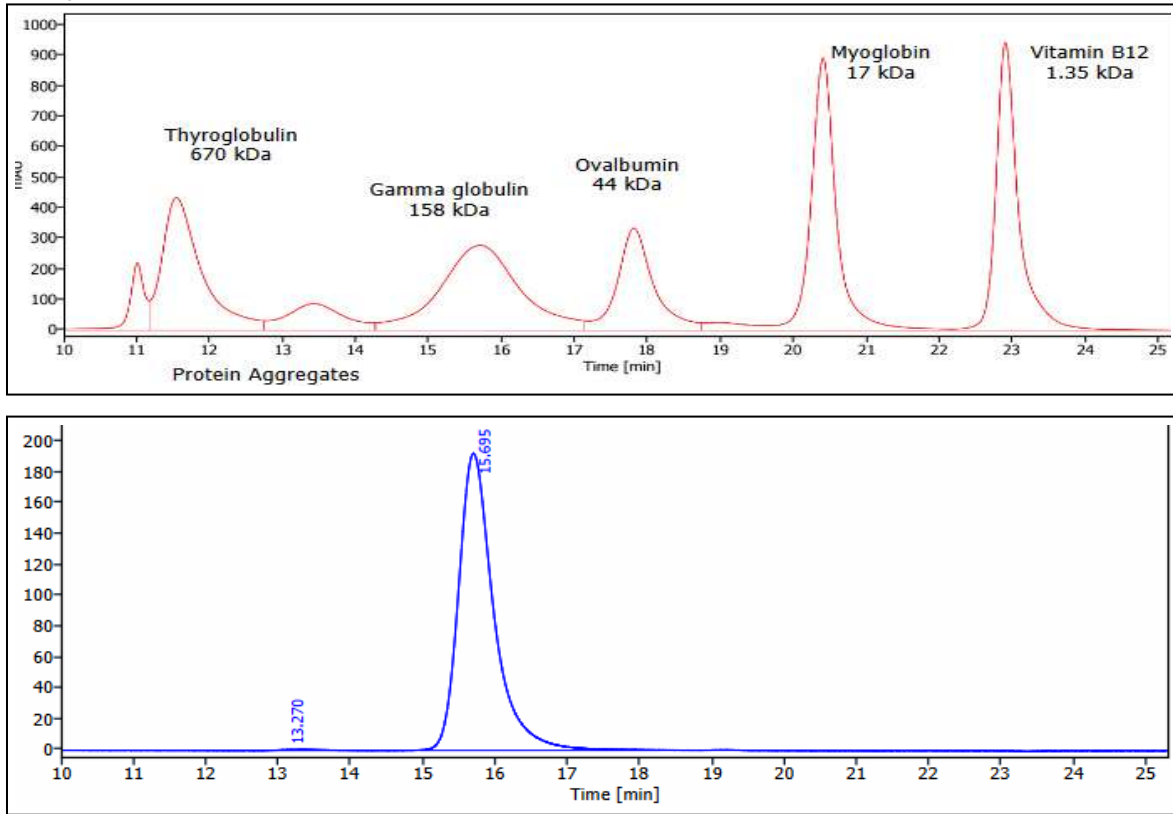
InVivo BioTech Services GmbH is certified to [ISO 9001](#) and [ISO 13485](#).

### Literature:

- [1] Yi H, Zhen Y, Zeng C, Zhang L, Zhao Y. Depleting anti-CD4 monoclonal antibody (GK1.5) treatment: influence on regulatory CD4+CD25+Foxp3+ T cells in mice. *Transplantation*. 2008 Apr 27;85(8):1167-74. doi: 10.1097/TP.0b013e31816a1242. PMID: 18431238.
- [2] Wilde DB, Marrack P, Kappler J, Dialynas DP, Fitch FW. Evidence implicating L3T4 in class II MHC antigen reactivity; monoclonal antibody GK1.5 (anti-L3T4a) blocks class II MHC antigen-specific proliferation, release of lymphokines, and binding by cloned murine helper T lymphocyte lines. *J Immunol*. 1983 Nov;131(5):2178-83. PMID: 6195255.

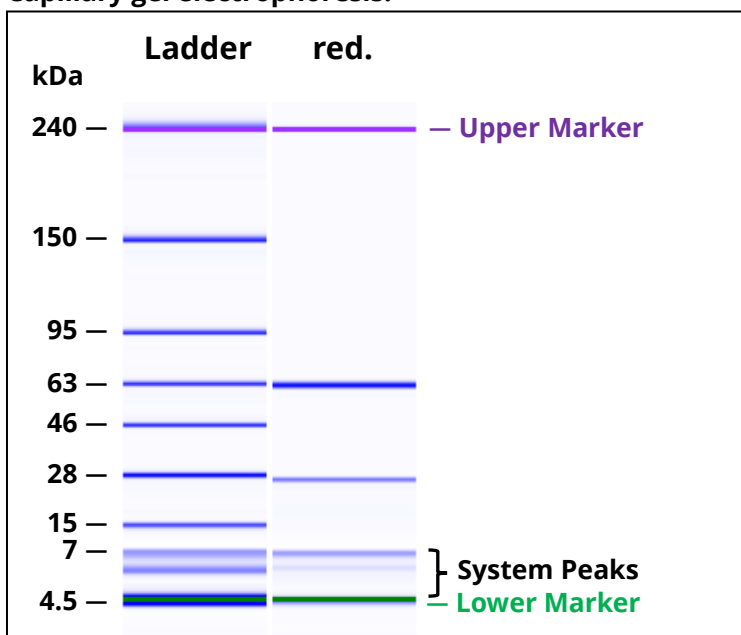
## CD4 mAb (GK 1.5), InVivoPure+ — Supplementary Data

### Analytical SEC:



Analytical SEC of purified protein (blue) in comparison with gel filtration standard (red).

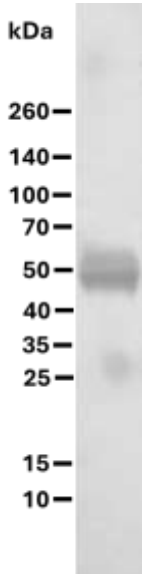
### Capillary gel electrophoresis:



CGE of the purified protein under reducing (red.) conditions.

The following methods were used for the additional characterization of one exemplary batch:

**Western blot analysis:**



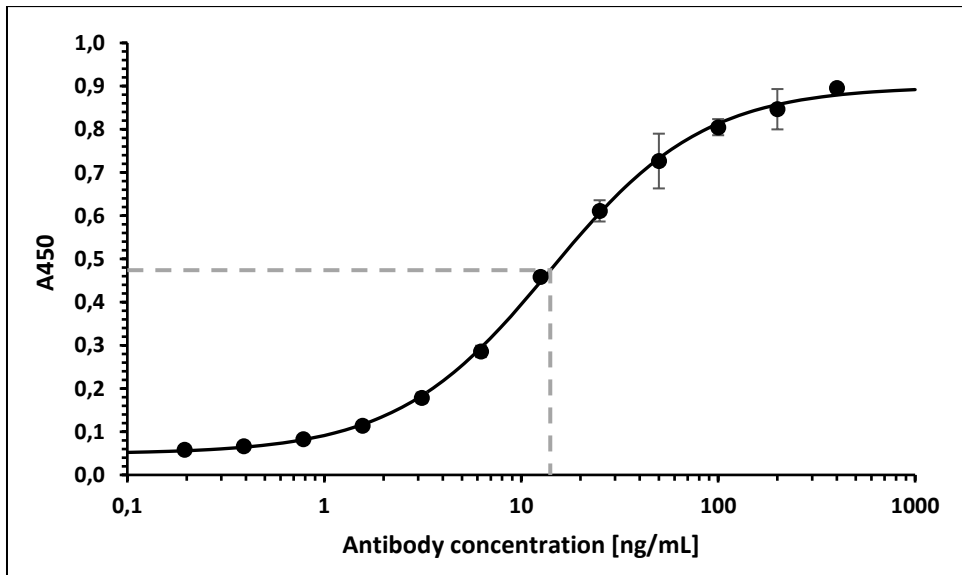
Lane 1: 1 µg reduced purified mouse CD4 with C-terminal his-tag

Primary antibody: CD4 mAb (GK1.5), InVivoPure+ (AK3602P+/01.1), 1:225 dilution

Secondary antibody: HRP labelled goat anti-rat IgG (H+L), 1:5000 dilution

Predicted band size: ~50 kDa

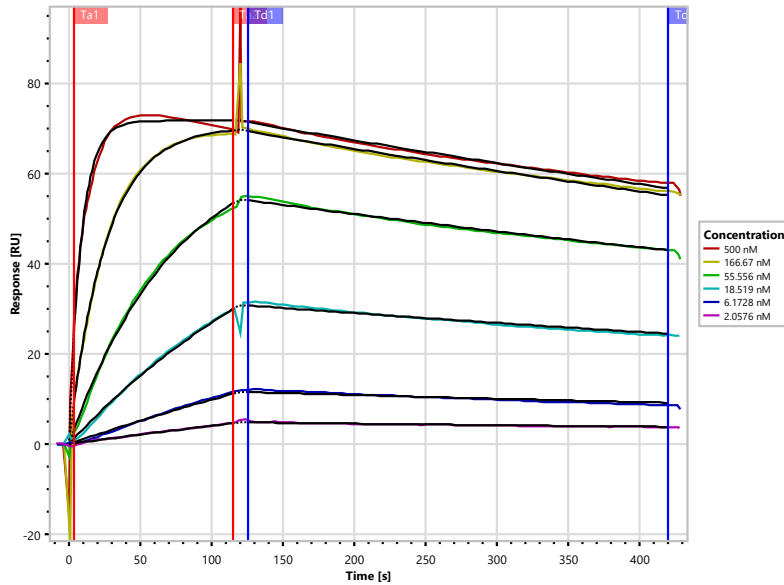
**ELISA analysis:**



ELISA analysis of CD4 mAb (GK 1.5) (Product-ID: AK3602P+/01.1). Coating antigen: Mouse CD4 His-tag Recombinant Protein at 1 µg/mL . The EC50 of the antibody is 14,05 ng/mL.

SPR analysis:

Target	Captured Target	Analyte	$K_D$ [M]	$k_{on}$ [ $M^{-1}s^{-1}$ ]	$k_{off}$ [ $s^{-1}$ ]
ProtA/G	CD4 mAb (GK1.5), AK3602P+/01.1	CD4	3.4E-09	2.3E+05	7.8E-04



A high capacity amine chip (Bruker Part No:1862614) was immobilized with Protein A/G. The antibody was captured at a concentration of 1.0  $\mu\text{g/mL}$ . For the analyte, a concentration range of 2.06 to 500 nM is used in a multi-injection cycle kinetics assay on a Bruker SPR-32 to determine the  $K_D$ ,  $k_{on}$  and  $k_{off}$  of the antibody-antigen-binding.