

PD-1 mAb (RMP1-14), InVivoPure

Endotoxin level ≤ 2 EU/mg

Description:

PD-1 is expressed on the surface of activated T cells, B cells and myeloid cells. PD-1 has two natural ligands, PD-L1 and PD-L2. Engagement of PD-1 with either ligand suppresses immune responses and promotes self-tolerance. PD-L1 and PD-L2 only share 37% sequence identity, but have similar functions and expression profiles. Where PD-L1 is expressed in immune cells such as T and B cells, DCs, and macrophages, as well as in many different tumor types. PD-L2 expression has been reported to be more restricted to APCs. The overexpression of PD-L1 and/or PD-L2 in cancer cells reduces the body's immune responses, enabling cancer cells to evade killing mediated by T cells. PD-L1 is expressed more widely by tumor cells than PD-L2, and the blockade of the PD-1/PD-L1 interaction is more frequently targeted by therapeutic agents [1].

RMP1-14 is a monoclonal antibody that targets the murine PD-1 protein [2], and has been used extensively to probe the effects of PD-1 inhibition in preclinical murine models [3].

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

Product-ID:	AK3615P
Clone:	RMP1-14
Immunogen:	Mouse PD-1 transfected BHK cells
Host:	Rat
Clonality:	Monoclonal
Isotype:	Rat IgG2a κ
Formulation:	Clear Liquid, PBS, pH 7.4, 0.2 μ m sterile filtered
Concentration:	≥ 1.00 mg/mL
Purity:	≥ 90 % (CGE, reducing conditions) ≤ 10 % aggregates (analytical SEC)
Endotoxin:	≤ 2 EU/mg (LAL test)
Storage:	2 - 8 °C
Recommended Isotype Control:	Rat IgG2a Isotype Control (AK3617P)

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

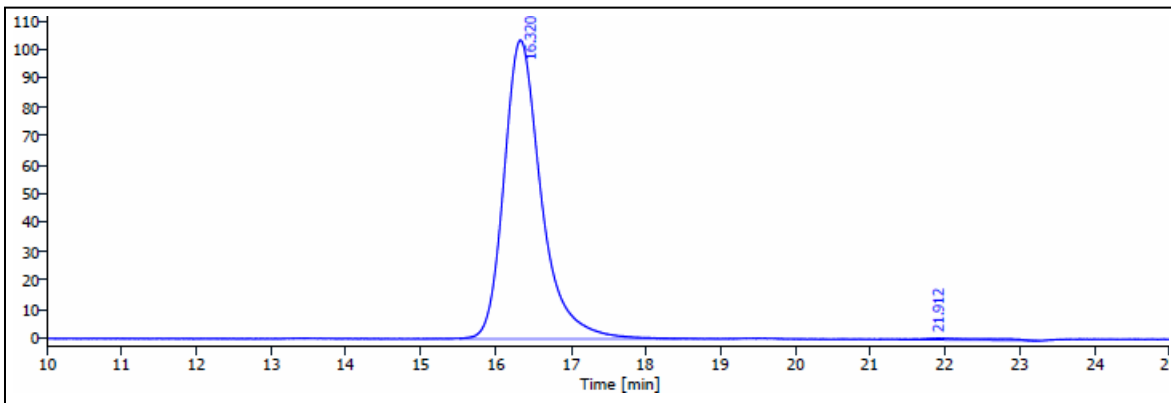
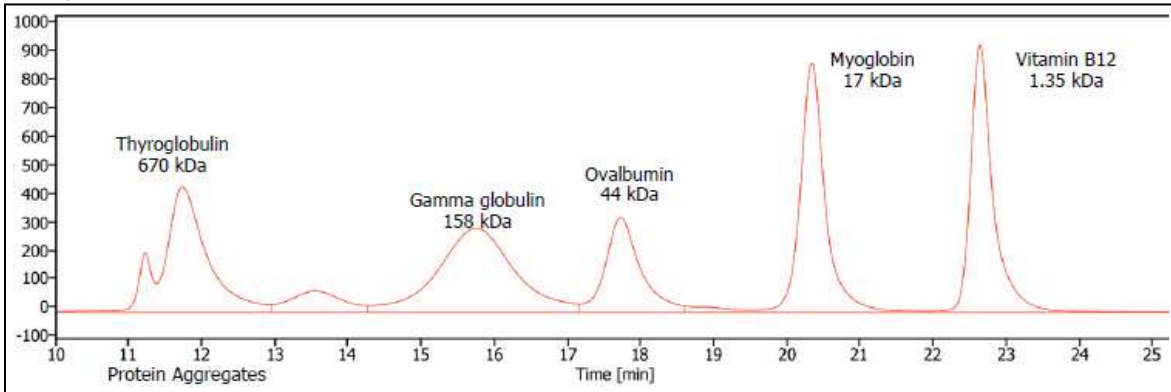
InVivo BioTech Services GmbH is certified to [ISO 9001](#) and [ISO 13485](#).

Literature:

- [1] Timilsina HP, Arya SP, Tan X. Biotechnological Advances Utilizing Aptamers and Peptides Refining PD-L1 Targeting. *Front Biosci (Elite Ed)*. 2024 Sep 19;16(3):28. doi: 10.31083/j.fbe1603028. PMID: 39344385.
- [2] Seo SK, Jeong HY, Park SG, Lee SW, Choi IW, Chen L, Choi I. Blockade of endogenous B7-H1 suppresses antibacterial protection after primary *Listeria monocytogenes* infection. *Immunology*. 2008 Jan;123(1):90-9. doi: 10.1111/j.1365-2567.2007.02708.x. Epub 2007 Oct 25. PMID: 17971153; PMCID: PMC2433284.
- [3] Agrawal K, Hill RC, Wilkinson BL, Allison PB, Thomas CE. Quantification of the anti-murine PD-1 monoclonal antibody RMP1-14 in BALB/c mouse plasma by liquid chromatography-tandem mass spectrometry and application to a pharmacokinetic study. *Anal Bioanal Chem*. 2020 Jan;412(3):739-752. doi: 10.1007/s00216-019-02292-1. Epub 2019 Dec 12. PMID: 31832706.

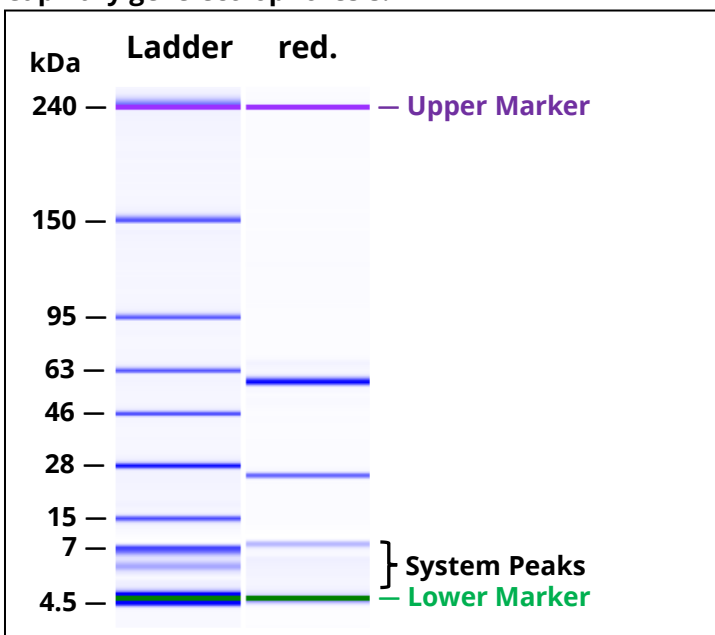
PD-1 mAb (RMP1-14), InVivoPure — Supplementary Data

Analytical SEC:



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

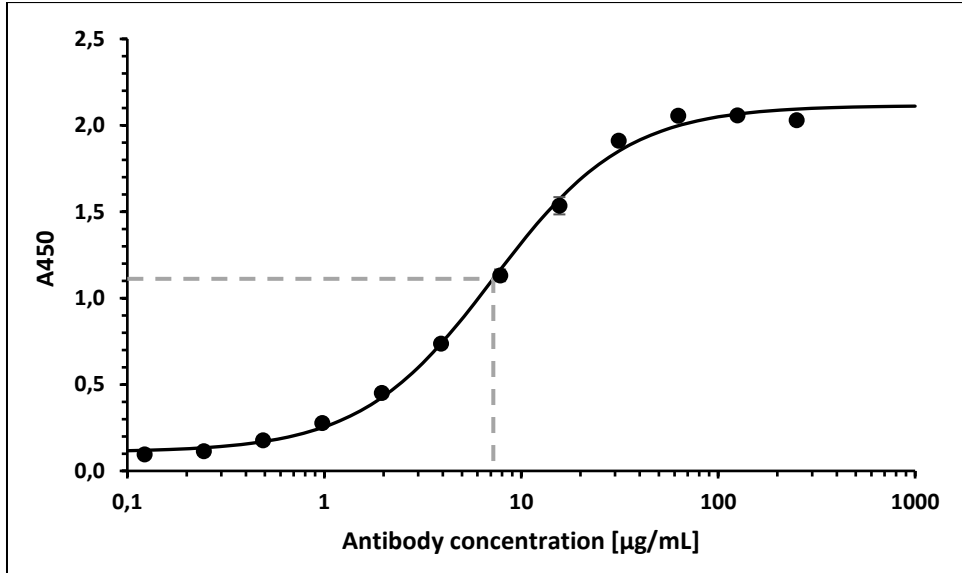
Capillary gel electrophoresis:



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

The following method was used for the additional characterization of one exemplary batch:

ELISA analysis:



ELISA analysis of anti-mouse PD-1 (RMP1-14) (Product-ID: AK3615P/01). Coating antigen: Mouse PD-1 His-tag, Rec. Protein (Product-ID: A42619) at 1 µg/mL . The EC50 of the antibody is 7,22 µg/mL.