

## InVivoSIM anti-human PD-1 (Sintilimab Biosimilar)

**Attention:** Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at <https://bioxcell.com/terms-and-conditions>.

### Lot Specific Information

**Lot Number:** Lot Specific\*  
**Volume:** Lot Specific\*  
**Concentration:** Lot Specific\* (generally 4 to 11 mg/ml) \*  
**Total Protein:** Lot Specific\*

\*This information will be noted on the certificate of analysis that ships with this product.

### Product Information

**Catalog Number:** SIM0054  
**Clone:** Sintilimab  
**Isotype:** Human IgG4,  $\kappa$   
**Recommended Isotype Control(s):** RecombiMAb human IgG4 (S228P) isotype control, anti-hen egg lysozyme  
**Recommended Dilution Buffer:** InVivoPure pH 7.0 Dilution Buffer  
**Mutations:** S228P  
**Immunogen:** Human PD-1  
**Reported Applications:** *in vivo* functional assays  
*in vitro* functional assays  
Flow cytometry  
ELISA  
**Formulation:** PBS, pH 7.0  
Contains no stabilizers or preservatives  
**Endotoxin:** <0.5EU/mg (<0.0005EU/ $\mu$ g)  
Determined by LAL gel clotting assay  
**Purity:** >95%  
Determined by SDS-PAGE  
**Sterility:** 0.2  $\mu$ m filtration  
**Production:** Purified from cell culture supernatant in an animal-free facility  
**Purification:** Protein A  
**Aggregation:** <5%  
Determined by SEC  
**RRID:**  
**Molecular Weight:** 150 kDa

### Murine Pathogen Test Results

Mouse Norovirus: Negative, Mouse Parvovirus: Negative, Mouse Minute Virus: Negative, Mouse Hepatitis Virus: Negative, Reovirus Screen: Negative, Lymphocytic Choriomeningitis virus: Negative, Lactate Dehydrogenase-Elevating Virus: Negative, Mouse Rotavirus: Negative, Theiler's Murine Encephalomyelitis: Negative, Ectromelia/Mousepox Virus: Negative, Hantavirus: Negative, Polyoma Virus: Negative, Mouse Adenovirus: Negative, Sendai Virus: Negative, Mycoplasma Pulmonis: Negative, Pneumonia Virus of Mice: Negative, Mouse Cytomegalovirus: Negative, K Virus: Negative

### Description

This non-therapeutic biosimilar antibody uses the same variable regions as the therapeutic antibody, Sintilimab, making it ideal for research use. Sintilimab is a humanized IgG4 kappa monoclonal antibody with an S228P hinge stabilization mutation that specifically reacts with programmed cell death protein 1 (PD-1), also known as CD279. Sintilimab is shown to have a greater affinity for human PD-1 compared to both nivolumab and pembrolizumab. Sintilimab also shows cross-

reactivity to PD-1 cynomolgus monkey species. PD-1 is an inhibitory receptor belonging to the CD28 family of the Ig superfamily, and it is transiently expressed on the cell surface of CD4 and CD8 T cells, B cells, as well as myeloid cells. PD-L1 is the main ligand of PD-1 and is expressed on the surface of tumor cells and antigen-presenting cells (APCs). PD-1 and PD-L1 interactions are central to immune homeostasis and prevention of autoimmunity. PD-1 binding to PD-L1 inhibits T cell activation, thereby diminishing T cell proliferation, cytokine production, and cytotoxic activity. This phenomenon is critical in the downregulation of the immune response during chronic inflammation and minimizing tissue damage. Cancers, such as squamous cell carcinoma, lung cancer, melanoma, ovarian cancer, renal cell carcinoma, colon adenocarcinoma, and breast adenocarcinoma, often express PD-L1 in high abundance, wherein the cancer cells exploit the PD1/PD-L1 pathway to evade immune surveillance via immune evasion. In immune checkpoint inhibitor-responsive experimental models, the tumor growth can be transiently arrested in vivo through treatment with anti-PD-1 antibodies, e.g., sintilimab, which block the interactions between PD-1 and PD-L1 proteins.

## Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at <https://bioxcell.com/faqs>.

## Protocol Information

Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

## Application References

For a complete list of references, visit

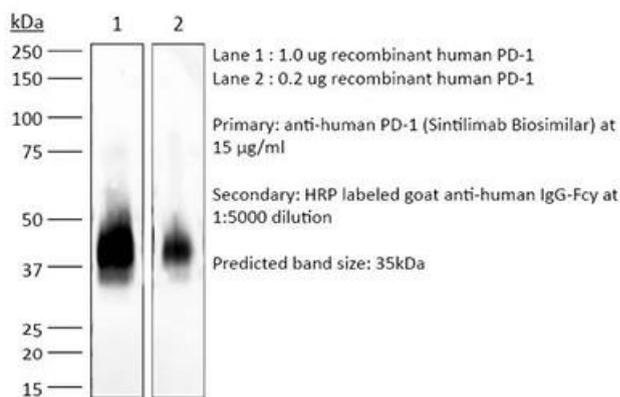
[https://bioxcell.com/sim0054?bxcs=9k1b3a#tab\\_references](https://bioxcell.com/sim0054?bxcs=9k1b3a#tab_references)

or scan the QR code below.



## Binding Validation

Validation data shown below confirms that this clone binds to its target antigen. For lot specific binding validation data, e-mail [technicalservice@bioxcell.com](mailto:technicalservice@bioxcell.com).



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