

## Canine PD-1 Monoclonal Antibody

### ORDERING INFORMATION

Catalog No.	Clone No.	MAb Subtype	Size
34090	JC053	IgA	100µg

**Format:** PEG-purified antibody in PBS, pH 7.4. Concentration is lot-specific; please refer to the vial label.

### BACKGROUND

Each year, thousands of dogs are diagnosed with cancer. Canine cancers bear many of the hallmarks of human cancers including tissue location, tumor progression, and response to chemotherapy and radiation. Unfortunately, canine lymphocyte populations are not as well defined as human lymphocytes, and reagents that target immune checkpoint pathways are not yet widely available for veterinary research. Interruption of the programmed death 1 (PD-1) / programmed death ligand 1 (PD-L1) pathway is an established and effective therapeutic strategy in human oncology and may be effective for treating canine cancers as well.

### SPECIFICATION SUMMARY

**Antigen:** Recombinant extracellular domain of canine PD-1 fused with the Fc domain of human IgG1 expressed in *D. melanogaster* S2 cells.

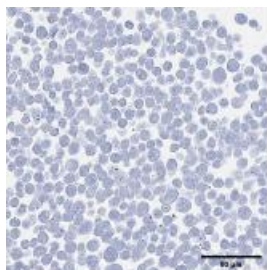
**Host Species:** Mouse

**Specificity:** This antibody recognizes canine PD-1.

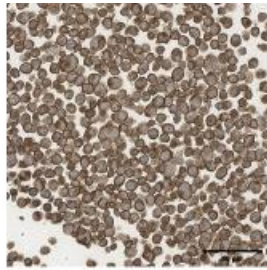
### APPLICATIONS

#### Immunohistochemistry

IgA control

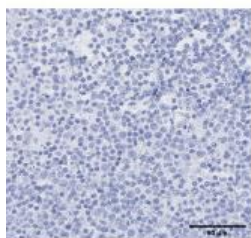


JC053

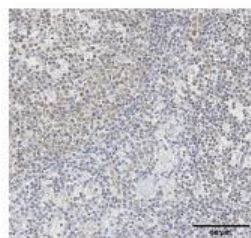


CHO-PD1 cells fixed with 10% neutral buffered formalin, prepared in Histogel and embedded in paraffin, antigen retrieval in citrate buffer at pH 6. Cells stained with IgA isotype control or with JC053.

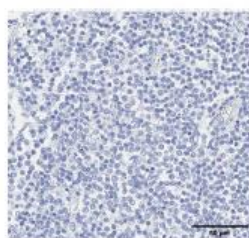
Tonsil, IgA control



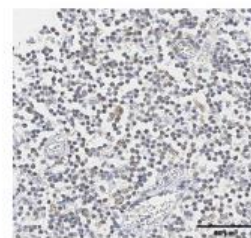
Tonsil, JC053



Lymph node, IgA control



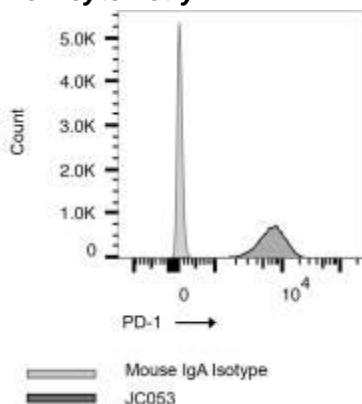
Lymph node, JC053



Formalin-fixed, paraffin-embedded canine tonsil and lymph node stained with IgA isotype control or with JC053.

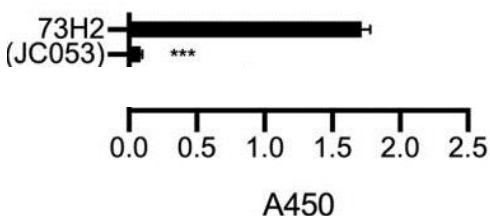
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### Flow cytometry



Detection of PD-1 expression on CLGL-90 cells (Chronic Large Granular Lymphocytic-90) stained with JC053 (dark gray) vs. mouse IgA isotype control (light gray).

### Inhibition of PD-1 and PD-L1 Interaction



JC053 antibody added to ELISA plates coated with PD-1 followed by the addition of biotinylated PD-L1 and streptavidin-HRP. JC053 antibody blocked binding of PD-1 to PD-L1 as compared with binding of PD-1 to PD-L1 in the presence of a non-inhibitory antibody 73H2.

Endusers should determine optimal antibody concentrations for their applications.

All images courtesy of Dr. JW Choi, University of California, Davis.

### STORAGE AND STABILITY

This antibody is stable for at least one (1) year at -20°C to -70°C. Store in appropriate aliquots to avoid multiple freeze-thaw cycles.

### PRODUCT REFERENCE

Choi JW et al. 2020 *Development of canine PD-1/PD-L1 specific monoclonal antibodies and amplification of canine T cell function*. PLoS One. 2020; 15(7): e0235518.