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# Monoclonal Antibodies Specific to Canine PD-1 and PD-L1

Tech ID: 31820 / UC Case 2018-810-1

## ABSTRACT

Researchers at the University of California, Davis have developed monoclonal antibodies with multiple applications relevant to canine PD-1 and PD-L1.

## FULL DESCRIPTION

T-cells are lymphocytes that play a key role in the immune system by facilitating cell death in cells that have been infected by pathogens or transformed into tumorigenic cells. Programmed Cell Death Receptor 1 (PD-1) is an immune-inhibitory receptor that is primarily expressed on activated T and B cells. When PD-1 binds with Programmed Cell Death Ligand 1 (PD-L1) - which is commonly expressed in tumor cells, it suppresses T-cell activity and prevents tumor eradication. Because of this relationship, several companies have produced monoclonal antibodies (mAbs) specific for human PD-1 and PD-L1. These have shown efficacy against a broad range of tumors. PD-1 and PD-L1 also exist in other animals - such as canines. However, there are currently no canine-specific, PD-1/PD-L1 reagents available for either research or clinical purposes.

Researchers at the University of California, Davis have developed mAbs specifically for canine PD-1 and PD-L1. These antibodies bind the specific canine ligands with sufficient affinity that they can be used in flow cytometry and tissue staining. Thus, these antibodies have a research purpose - allowing efficient staining for these molecules. These reagents are also being explored for additional diagnostic and therapeutic applications.

## APPLICATIONS

- ▶ mAbs that function as a staining method for canine PD-1/PD-L1
- ▶ Potential diagnostic and therapeutic tool for canine cancers

## FEATURES/BENEFITS

- ▶ Potential to be a key diagnostic and therapeutic tool for canine-specific cancers

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## INVENTORS

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## OTHER INFORMATION

### KEYWORDS

PD-1, PD-L1, Canine cancers, Monoclonal antibodies, mAbs, Staining, Reagent

### CATEGORIZED AS

- ▶ **Biotechnology**
  - ▶ Other
- ▶ **Medical**
  - ▶ Diagnostics
  - ▶ Disease: Cancer
  - ▶ Research Tools
  - ▶ Therapeutics
- ▶ **Research Tools**
  - ▶ Antibodies
  - ▶ Reagents
- ▶ **Veterinary**
  - ▶ Companion Animal
  - ▶ Diagnostics
  - ▶ Other
  - ▶ Therapeutics

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2018-810-1

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