

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

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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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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

RELATED CASES

2018-810-1

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- ▶ JC071c2, a Caninized Monoclonal Antibody Mutant Specific for Canine PDL1 That Could Avoid Potential Nglycosylation and W Oxidation
- ▶ Monoclonal Antibodies: CCR4 Antibody for Treating Canine Lymphoma and c-KIT Monoclonal Antibodies for Detecting and Treating Canine Mast Cell Tumors
- ▶ Monoclonal Antibodies Specific For Canine C-Kit
- ▶ Jc071c, a Caninized Monoclonal Antibody Specific for Canine Pd-L1
- ▶ JC071c1, a Caninized Monoclonal Antibody Mutant Specific for Canine PDL1 That Could Avoid Potential Nglycosylation and N-deamidation within CDR Sequences
- ▶ JC071ch, a Chimeric Monoclonal Antibody Specific for Canine PDL1
- ▶ Monoclonal Neutralizing Antibodies Specific for Canine TNF Alpha
- ▶ JC071c4, a Caninized Monoclonal Antibody Mutant Specific for Canine PDL1 That Could Avoid Potential Nglycosylation within Light Chain CDR1

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