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