PD-L1

Format	CATALOG NO.	Pack size	Dilution
Concentrated	GB31171A,C	0.1, 1.0 mL	1:100
Prediluted	GB31171AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

Programmed death ligand 1 (PD-L1, or CD274) suppresses tumor-reactive T-cells by connecting to the programmed death-1 (PD-1) receptor, hence rendering tumor cells impervious to CD8+ T cell-mediated cytolysis. Research indicates that the inhibitory receptor PD-1 is present on tumor-infiltrating lymphocytes (TIL), whereas PD-L1 is expressed on tumor cells. The evaluation of PD-L1 expression alongside CD8+ TIL density could serve as a valuable predictive indicator in several malignancies, such as stage III NSCLC, hormone receptor-negative breast cancer, and sentinel lymph node melanoma. Clinical trials employing humanized chimeric antibodies that suppress checkpoint pathways, such as anti-PD-1 and anti-PD-L1, have shown reduced tumor progression and enhanced survival rates. Although the detection of PD-L1 overexpression using immunohistochemistry is not yet standardized, it has gained significance in recognizing these tumors, as targeted therapy may enhance clinical outcomes for these patients. In cutaneous melanoma, the targeting of PD-1/PD-L1 has yielded significant therapeutic advantages for patients in the last 5 to 10 years. The application of immunohistochemistry for protein identification, in conjunction with innovative medicines like checkpoint inhibitors and vaccinations, is creating new therapy alternatives for cancer patients. The PD-L1 [CAL10] clone does not exhibit cross-reactivity with PD-L2.

INTENDED USE -

PD-L1 [CAL10] is a rabbit monoclonal antibody designed for laboratory application in the qualitative detection of PD-L1 protein using immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence must be supplemented by morphological studies utilizing appropriate controls and assessed in conjunction with the patient's clinical history and other diagnostic tests by a skilled pathologist.

SUMMARY AND EXPLANATION -

Programmed death ligand 1 (PD-L1, or CD274) suppresses tumor-reactive T-cells by connecting to the programmed death-1 (PD-1) receptor, hence rendering tumor cells impervious to CD8+ T cell-mediated cytolysis. Research indicates that the inhibitory receptor PD-1 is present on tumor-infiltrating lymphocytes (TIL), whereas PD-L1 is

expressed on tumor cells. The evaluation of PD-L1 expression alongside CD8+ TIL density could serve as a valuable predictive indicator in several malignancies, such as stage III NSCLC, hormone receptor-negative breast cancer, and sentinel lymph node melanoma. Clinical trials employing humanized chimeric antibodies that suppress checkpoint pathways, such as anti-PD-1 and anti-PD-L1, have shown reduced tumor progression and enhanced survival rates. Although the detection of PD-L1 overexpression using immunohistochemistry is not yet standardized, it has gained significance in recognizing these tumors, as targeted therapy may enhance clinical outcomes for these patients. In cutaneous melanoma, the targeting of PD-1/PD-L1 has yielded significant therapeutic advantages for patients in the last 5 to 10 years. The application of immunohistochemistry for protein identification, in conjunction with innovative medicines like checkpoint inhibitors and vaccinations, is creating new therapy alternatives for cancer patients. The PD-L1 [CAL10] clone does not exhibit cross-reactivity with PD-L2.

PRINCIPLE OF PROCEDURE -

Antigen detection in tissues and cells is a multi-step immunohistochemistry procedure. The first step attaches the primary antibody to its designated epitope. Following the tagging of the antigen with a primary antibody, either a one-step or two-step detection method may be employed. A one-step procedure will utilize a polymer tagged with an enzyme that binds to the main antibody. A two-step approach will involve the addition of a linker antibody to connect with the main antibody. An enzyme-conjugated polymer is subsequently introduced to bind the linkerantibody.Thepresenceofboundantibodiesisdemonstratedbyacolorimetric response.

SOURCE - : Rabbit monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE- CAL10

ISOTYPE - IgG

PROTEIN CONCENTRATION - Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - Peptide corresponding to the region within human PD-L1

CELLULAR LOCALISATION - Membranous/cytoplasmic

POSITIVE TISSUE CONTROL - Lung adenocarcinoma or tonsil

KNOWN APPLICATIONS - Immunohistochemistry

30-40 min. At RT. Staining of formalin-fixed tissues requires heating tissue sections in between pH 7.4 - 9.0 for 45 min at 95ºC followed by cooling at room temperature for 20 minutes.

SUPPLIED AS - Buffer with protein carrier and preservative

STORAGE AND STABILITY -

Store at 2ºC to 8ºC. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user.

Materials required but not provided -

1) Positivetissuecontrol-Lungadenocarcinomaortonsil
2) Negativecontroltissue(internalorexternal)
3) Microscopeslidesandcoverslips
4) Stainingjarsorbaths
5) Timer
6) Xyleneorxylenesubstitute
7) Ethanolorreagentalcohol
8) Deionizedordistilledwater
9) Heatingequipmentorenzymefortissuepretreatmentstep
10) Detection system
11) Chromogen
12) Wash buffer
13) Hematoxylin
14) Antibody diluents
15) Peroxide block
16) Light microscope
17) Mounting medium

LIMITATIONS-

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Genebio products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.