Data Sheet (Cat.No.TMAZ-0006)

TargetMol

Anti-PD-1 Monoclonal Antibody

Product Details

Ig Type:	Rabbit monoclonal IgG
Reactivity:	Human
Conjugation:	Unconjugated
Molecular Weight:	150 kDa
Purification:	Protein A Affinity Purified

Applications

Verified Activity:	Flow cytometry analysis of PD-1 overexpressed 417F cells with TMAZ-0006, followed by goat anti-rabbit IgG-ABflo 647 (red line). The isotype control is rabbit IgG (black line).
Application:	ELISA,FCM
Recommended	0.1-0.2 μg/10E6 cells for FCM; 1 ng/μl for ELISA

Properties

Purity:	> 95% as determined by SDS-PAGE.
Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	PD-1
Antigen Species:	Human
Gene ID:	5133
Uniprot ID:	Q15116
Synonyms:	Programmed cell death protein 1
Biology Area:	Immunology Research

Research Background

Inhibitory receptor on antigen activated T-cells that plays a critical role in induction and maintenance of immune tolerance to self (PubMed: 21276005). Delivers inhibitory signals upon binding to ligands CD274/PDCD1L1 and CD273/PDCD1LG2 (PubMed: 21276005). Following T-cell receptor (TCR) engagement, PDCD1 associates with CD3-TCR in the immunological synapse and directly inhibits T-cell activation (By similarity). Suppresses T-cell activation through the recruitment of PTPN11/SHP-2: following ligand-binding, PDCD1 is phosphorylated within the ITSM motif, leading to the recruitment of the protein tyrosine phosphatase PTPN11/SHP-2 that mediates dephosphorylation of key TCR proximal signaling molecules, such as ZAP70, PRKCQ/PKCtheta and CD247/CD3zeta (By similarity)|The PDCD1-mediated inhibitory pathway is exploited by tumors to attenuate anti-tumor immunity and escape destruction by the immune system, thereby facilitating tumor survival (PubMed: 28951311). The interaction with CD274/PDCD1L1 inhibits cytotoxic T lymphocytes (CTLs) effector function (PubMed: 28951311). The blockage of the PDCD1-mediated pathway results in the reversal of the exhausted T-cell phenotype and the normalization of the anti-tumor response, providing a rationale for cancer immunotherapy (PubMed: 22658127, PubMed: 25034862,

PubMed: 25399552)

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