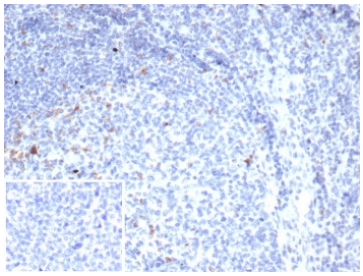
CTLA4 Antibody / CD152 / Cytotoxic T-lymphocyte protein 4 [clone rCTLA4/7219] (V4922)

Catalog No.	Formulation	Size
V4922-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4922-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4922SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

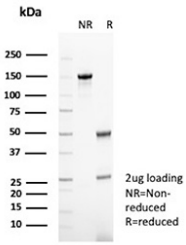
Recombinant | MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rCTLA4/7219
Purity	Protein A/G affinity
UniProt	P16410
Localization	Cell surface, Secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This CTLA4 antibody is available for research use only.



IHC staining of FFPE human tonsil tissue with CTLA4 antibody (clone rCTLA4/7219). Inset: PBS used in place of primary Ab (secondary Ab negative control). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free CTLA4 antibody (clone rCTLA4/7219) as confirmation of integrity and purity.

Description

CTLA4 antibody targets Cytotoxic T lymphocyte associated protein 4, encoded by the CTLA4 gene and also known as CD152. CTLA4 is a type I transmembrane immune checkpoint receptor primarily expressed on activated T lymphocytes and regulatory T cells. It is localized to the plasma membrane and intracellular vesicles, where it functions as a critical negative regulator of T cell activation and immune homeostasis. By opposing costimulatory signaling, CTLA4 plays a central role in controlling adaptive immune responses and maintaining self-tolerance.

Functionally, Cytotoxic T lymphocyte associated protein 4 limits T cell proliferation, cytokine production, and cell cycle progression following antigen recognition. CTLA4 competes with the costimulatory receptor CD28 for binding to CD80 and CD86 on antigen-presenting cells, binding these ligands with higher affinity and thereby attenuating activating signals. Through this mechanism, CTLA4 serves as a key immune checkpoint that fine-tunes the magnitude and duration of T cell responses. A CTLA4 antibody supports studies focused on immune regulation and checkpoint signaling.

CTLA4 expression is tightly regulated during T cell development and activation, with particularly high and constitutive expression in regulatory T cells. It is most relevant in lymphoid tissues such as thymus, lymph nodes, and spleen, reflecting its role in immune tolerance and peripheral immune surveillance. CTLA4 can associate with intracellular signaling adaptors through its cytoplasmic tail, enabling modulation of downstream signaling pathways that influence T cell fate and function.

From a disease-relevance perspective, CTLA4 has been extensively implicated in immune dysregulation and autoimmune disorders. Altered CTLA4 expression or function has been associated with conditions characterized by excessive or uncontrolled immune activation. CTLA4 is also a central focus of cancer immunology research due to its role in suppressing antitumor immune responses, making it a foundational target for studies of immune checkpoint biology and therapeutic modulation of immunity.

At the molecular level, Cytotoxic T lymphocyte associated protein 4 contains a conserved extracellular immunoglobulin V-like domain, a single transmembrane region, and a cytoplasmic tail with signaling motifs that regulate receptor trafficking and signal attenuation. Post-translational regulation and intracellular localization contribute to its functional behavior without altering primary sequence. CTLA4 antibody reagents, including clone rCTLA4/7219, support research applications focused on immune checkpoint signaling, T cell regulation, and disease-associated immune mechanisms, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the CTLA4 antibody should be determined by the researcher.

Immunogen

A recombinant fragment of human protein was used as the immunogen for the CTLA4 antibody.

Storage

Aliquot the CTLA4 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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