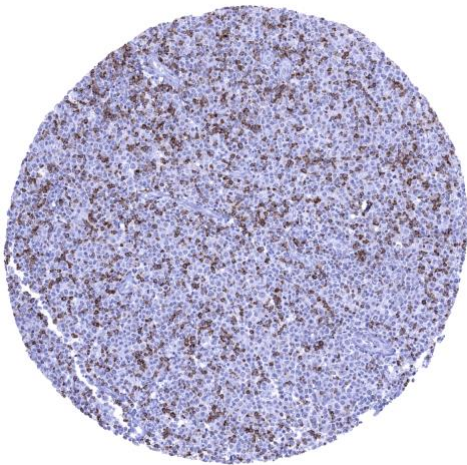


Anti-CTLA-4 Antibody MSVA-152R / Recombinant Rabbit monoclonal

Human SwissProt	P16410
Human Gene Symbol	CTLA4
Synonyms	ALP55; CD152; Celiac disease 3 (CELIAC3); Cytotoxic T-lymphocyte-associated antigen 4 (CTLA4); GRD4; GSE; ICOS; Insulin-dependent Diabetes Mellitus 12 (IDDM12)
Specificity	CTLA4
Immunogen	Recombinant fragment of human CTLA4 protein
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cell surface. Secreted.

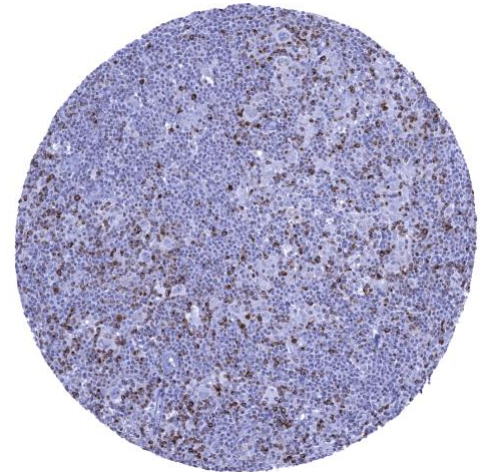
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	Tonsil: A moderate strong membranous and cytoplasmic CTLA4 immunostaining should be seen in a subset of T-lymphocytes with strongest staining in follicular T-helper cells of germinal centres.
Negative Control	Tonsil: The majority of lymphocytes in germinal centres and all epithelial cells should stain negative.



Diffuse large B-cell lymphoma containing a large number of CTLA-4 positive lymphocytes.



Tonsil - Normal tonsil with CTLA-4 staining of a subset of lymphocytes.



Hodgkin's lymphoma containing numerous reactive CTLA-4 positive lymphocytes.

Biology

CTLA-4 (cytotoxic T-lymphocyte-associated protein 4) is a member of the immunoglobulin superfamily. Its expression is regulated by several transcription factors including FOXP3 which determines the lineage of regulatory T-cells. CTLA-4 is thus constitutively expressed in regulatory T cells while it is upregulated in other T cells after activation only. The role of CTLA-4 in signaling depends on cellular localization of CTLA-4. In resting T cells, CTLA-4 localizes intracellularly. Upon T cell stimulation, CTLA-4 containing vesicles are exocytosed and presented on immunological synapses. CTLA4 is closely interacting with various other surface proteins such as CD28, CD80, and CD86. CTLA-4 and CD28 are co-receptors that bind to CD80 and CD86 to regulate T-cell activation. CD28 co-stimulation is required for T-cell activation, whereas CTLA-4 inhibits T-cell response by opposing the actions of CD28-mediated co-stimulation. Even though CTLA-4 is expressed by activated CD8 killer T cells, the major physiologic role of CTLA-4 appears to be through distinct effects on the two major subsets of CD4 positive T cells: down-modulation of helper T-cell activity and enhancement of regulatory T-cell suppressive activity. The CTLA-4 pathway is a commonly targeted pathway in cancer immunotherapy. CTLA-4 inhibitors for example include ipilimumab and tremelimumab. In normal tissues, a strong and distinct predominantly membranous CTLA-4 immunostaining is seen in a subset of T-lymphocytes including regulatory T-cells. CTLA-4 positive lymphocytes occur in a variable number in virtually all tumors.

Potential Research Applications

-Quantification of CTLA-4 positive lymphocytes (The antibody is suited for multicolor immunofluorescence).

Protocol Suggestions

Dilution: 1:50 ; pH7,8 is optimal. Freshly cut sections should be used (more than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

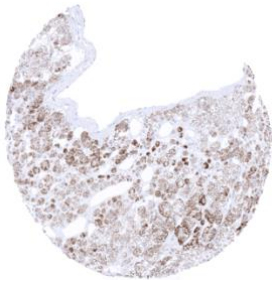
Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

Not for resale without express authorization.

Warranty

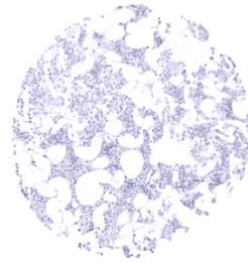
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



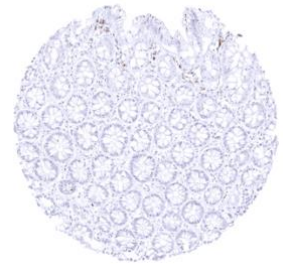
Adrenal gland - Strong granular cytoplasmic CTLA-4 immunostaining of adrenocortical cells (tolerable cross-reactivity). Staining is absent in medullary cells



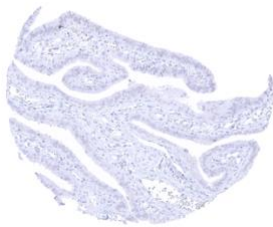
Adrenal gland - Weak to moderate granular cytoplasmic CTLA-4 immunostaining of adrenocortical cells (tolerable cross-reactivity)



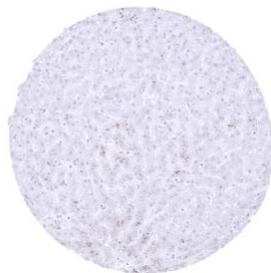
Bone marrow



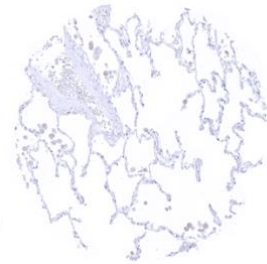
Colon descensens, mucosa - Weak apical cytoplasmic granular CTLA-4 immunostaining in superficial epithelial cells (tolerable cross-reactivity)



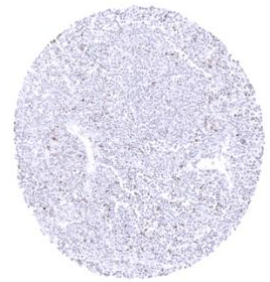
Fallopian tube, mucosa



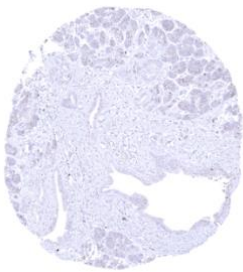
Liver - Weak granular CTLA-4 staining of pigment



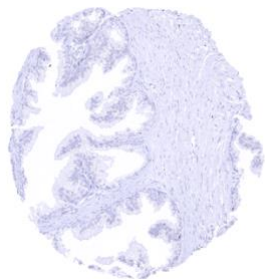
Lung



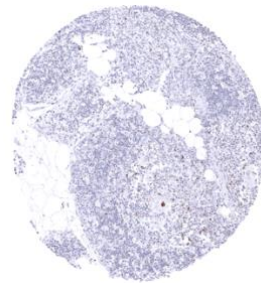
Lymph node - CTLA-4 immunostaining in a fraction of lymphocytes



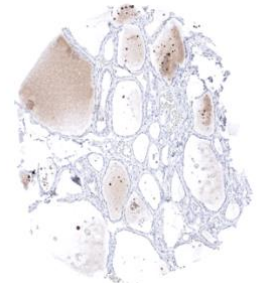
Pancreas - Weak apical cytoplasmic granular CTLA-4 staining in acinar cells and in excretory duct epithelial cells (tolerable cross-reactivity)



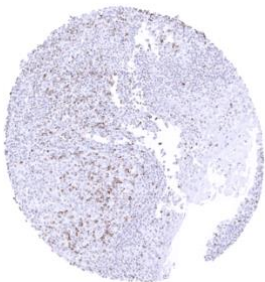
Prostate



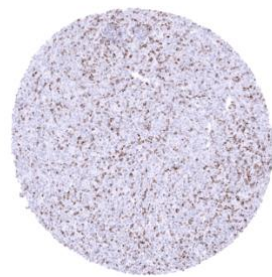
Thymus - CTLA-4 staining in a fraction of lymphocytes



Thyroid gland - CTLA-4 immunostaining of colloid (this may represent a cross-reactivity)



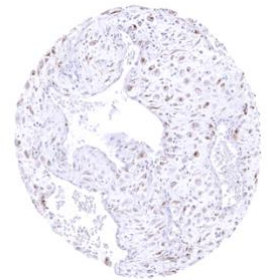
Tonsil - A distinct CTLA-4 immunostaining is seen in a fraction of lymphocytes



Tonsil - Distinct CTLA-4 positivity of a fraction of lymphocytes



Tonsil, surface epithelium - Distinct staining of a subset of lymphocytes



Uterus, endometrium (pregnancy) - Granular cytoplasmic CTLA-4 immunostaining of decidua cells (tolerable cross-reactivity)