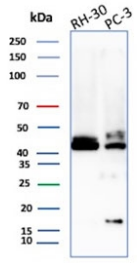
CD83 Antibody [clone r1H4b] (V5820)

Catalog No.	Formulation	Size
V5820-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5820-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5820SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

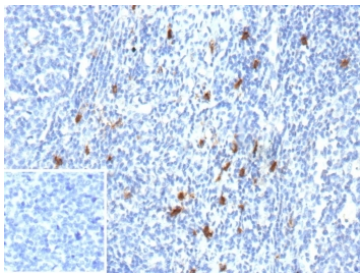
Recombinant MOUSE MONOCLONAL

Bulk quote request

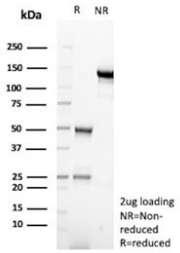
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	r1H4b
Purity	Protein G affinity
UniProt	Q01151
Localization	Cytoplasm, Membrane
Applications	Western Blot : 2-4ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This CD83 antibody is available for research use only.



Western blot testing of human RH30 and PC-3 cell lysate with CD83 antibody. Expected molecular weight: ~23-60 kDa depending on level of glycosylation.



IHC staining of FFPE human tonsil tissue with CD83 antibody (clone 1H4b). 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 CD83 antibody (clone r1H4b) as confirmation of integrity and purity.

Description

CD83 antibody recognizes CD83, a type I transmembrane glycoprotein encoded by the CD83 gene on chromosome 6p23. This protein is a hallmark maturation marker for dendritic cells and plays an important immunomodulatory role across innate and adaptive immunity. CD83 exists in both membrane-bound and soluble forms and is expressed in activated dendritic cells, B cells, monocytes, macrophages, thymic epithelial cells, and selected activated T cell subsets. Clone r1H4b recognizes endogenous CD83 expression and is suitable for research applications requiring identification of dendritic cell maturation states or activation-dependent immune signatures. CD83 protein localizes to the plasma membrane and endosomal compartments, where it co-localizes with MHC class II machinery and accessory molecules that shape antigen presentation.

Functionally, CD83 contributes to immune homeostasis by regulating antigen presentation, co-stimulation, and cytokine-driven differentiation. In dendritic cells, membrane CD83 helps maintain stability of MHC class II complexes and promotes efficient T cell priming. Soluble CD83 exhibits distinct immunoregulatory properties that include limiting T cell activation and modulating inflammatory cytokine production. Studies indicate that CD83 participates in signaling pathways influencing T cell maturation in the thymus, particularly in the selection of developing thymocytes and in the organization of thymic epithelial networks.

CD83 expression is dynamically regulated during immune activation. Resting dendritic cells express low levels, which rapidly increase upon exposure to microbial stimuli, inflammatory cytokines, or toll-like receptor ligands. Activated B cells upregulate CD83 during germinal center responses where it influences antibody production and plasma cell differentiation. In macrophages and monocytes, CD83 expression can be induced by inflammatory or anti-inflammatory cues, reflecting its context-dependent regulatory roles. Developmentally, CD83 is expressed in the thymus during T cell maturation and in tissues where antigen-presenting cell networks form early microenvironmental structures. Isoform diversity results in structural variants that may differ in trafficking, stability, or soluble shedding, allowing CD83 to function through both cell surface and extracellular mechanisms.

CD83 biology is relevant to several disease contexts. Elevated or dysregulated expression appears in autoimmune diseases, chronic inflammatory disorders, transplantation settings, and selected cancers. Soluble CD83 has been studied for its potential anti-inflammatory and tolerogenic properties, including regulation of dendritic cell maturation and suppression of excessive T cell activation. Tumor cells in certain malignancies can exploit CD83-related pathways to modulate immune surveillance. Conversely, enhancing CD83 expression on dendritic cells can strengthen anti-tumor immunity by promoting robust T cell priming.

This CD83 antibody is suitable for detecting CD83 expression in studies focused on dendritic cell maturation, antigen

presentation, thymic development, B cell activation, inflammatory regulation, and immune tolerance. Clone r1H4b provides specific recognition of CD83 in research applications that examine dendritic cell phenotype, immune activation cascades, and interactions between innate and adaptive immunity. NSJ Bioreagents includes this reagent within its immunology and antigen-presenting cell focused antibody collection.

Application Notes

Optimal dilution of the CD83 antibody should be determined by the researcher.

Immunogen

Prokaryotic recombinant protein corresponding to 124 amino acids of the external N-terminus of the CD83 molecule was used as the immunogen for the CD83 antibody.

Storage

Aliquot the CD83 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.