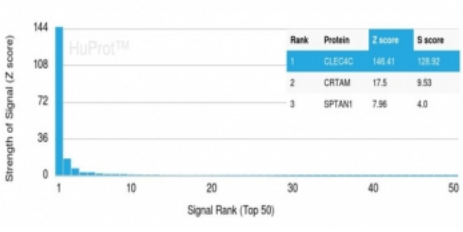
CD303 Antibody / Plasmacytoid Dendritic Cell Marker Antibody [clone CLEC4C/3400] (V4253)

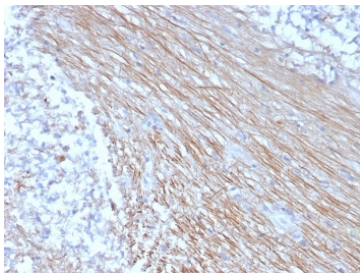
Catalog No.	Formulation	Size
V4253-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4253-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4253SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	CLEC4C/3400
Purity	Protein A/G affinity
UniProt	Q8WTT0
Localization	Membrane
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This CD303 Antibody / Plasmacytoid Dendritic Cell Marker Antibody is available for research use only.



CD303 Antibody HuProt Microarray Specificity. Protein microarray analysis using CD303 Antibody (clone CLEC4C/3400) demonstrates highly specific binding to CLEC4C / CD303 (BDCA2), with the target protein ranked as the top hit and showing a strong Z score with clear separation from all other proteins on the array. Signal intensity decreases sharply for non-target proteins, supporting selective recognition with minimal off-target interaction. Z score represents the strength of signal in standard deviations above the mean of all array signals, while S score reflects the separation between ranked targets and provides a measure of relative specificity.



CD303 Antibody Placental Tissue IHC. Immunohistochemistry analysis of FFPE human placental tissue using CD303 Antibody (clone CLEC4C/3400) shows membranous and cytoplasmic staining in scattered immune cells within the tissue, consistent with CD303 / CLEC4C (BDCA2) expression on plasmacytoid dendritic cells. Positive cells are distributed within stromal regions, while surrounding structural elements display minimal background staining. Hematoxylin counterstain provides nuclear contrast and tissue architecture. HIER: boil FFPE tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min and allow to cool before testing.

Description

C-type lectin domain family 4 member C (CLEC4C), also known as CD303 or BDCA2, is a type II transmembrane receptor expressed predominantly on plasmacytoid dendritic cells (pDCs), where it functions as a key regulator of innate immune responses. The CD303 Antibody / Plasmacytoid Dendritic Cell Marker Antibody is designed to detect this immune-specific receptor in biological systems focused on dendritic cell biology and immune regulation. CLEC4C is encoded on chromosome 12p13 and belongs to the C-type lectin receptor family, which mediates carbohydrate recognition and antigen-related signaling. This antibody is part of a collection of Human Protein Microarray validated antibodies that have been screened for specificity across thousands of proteins.

The CD303 antibody, also referred to as CLEC4C antibody and BDCA2 antibody in the literature, recognizes a protein localized to the cell surface of plasmacytoid dendritic cells. Engagement of CLEC4C leads to internalization of the receptor and modulation of signaling pathways that suppress type I interferon production. This regulatory mechanism is critical for maintaining immune balance and preventing excessive inflammatory responses.

This CD303 Antibody / Plasmacytoid Dendritic Cell Marker Antibody is uniquely positioned for studies of dendritic cell identification and immune system function. In immunohistochemistry, CD303 expression is typically observed as membranous and cytoplasmic staining in plasmacytoid dendritic cells within lymphoid tissues and inflammatory environments. Detection of CD303 enables identification of pDC populations and evaluation of their distribution in normal and disease-associated tissues.

Plasmacytoid dendritic cells play a central role in antiviral immunity through rapid production of type I interferons, and CLEC4C signaling serves as a regulatory checkpoint in this process. Alterations in pDC function and CD303 expression have been associated with autoimmune disease, viral infection, and cancer, where immune modulation contributes to disease progression and host response. As a result, CD303 serves as an important marker for studying immune cell subsets and regulatory pathways.

The mouse monoclonal clone CLEC4C/3400 provides consistent detection of CD303, supported by protein microarray specificity validation data demonstrating selective binding to the intended target. This CD303 Antibody / Plasmacytoid Dendritic Cell Marker Antibody is suitable for detecting CD303 expression in research applications focused on immune cell profiling, dendritic cell biology, and inflammatory signaling pathways. Its performance supports detailed evaluation of plasmacytoid dendritic cell distribution and function.

This antibody supports investigation of plasmacytoid dendritic cells, immune regulation, and disease-associated changes in CD303 expression.

This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the CD303 Antibody / Plasmacytoid Dendritic Cell Marker Antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 1-250) from the human protein was used as the immunogen for the CD303 antibody.

Storage

Aliquot the CD303 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

CD303 antibody, CLEC4C antibody, C-type lectin domain family 4 member C antibody, BDCA2 antibody, CD303 dendritic cell marker antibody

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