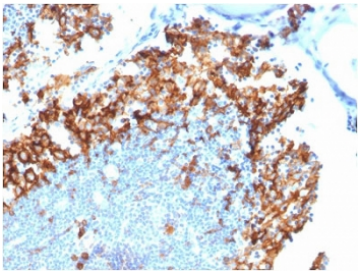
CD123 Antibody IL3RA/1531 / IL3RA Monoclonal Antibody [clone IL3RA/1531] (V7291)

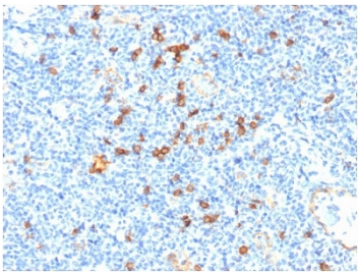
Catalog No.	Formulation	Size
V7291-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7291-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7291SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7291IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

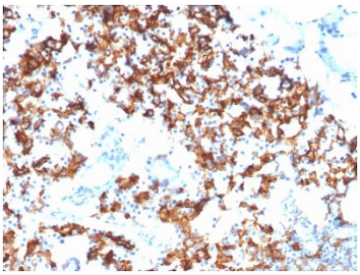
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	IL3RA/1531
Purity	Protein G affinity chromatography
UniProt	P26951
Localization	Cell surface, Cytoplasmic
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This CD123 Antibody IL3RA/1531 / IL3RA Monoclonal Antibody is available for research use only.



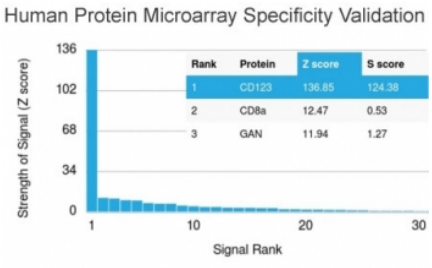
CD123 Antibody IL3RA/1531 in Human Lymph Node IHC. Immunohistochemistry of FFPE human lymph node tissue using CD123 Antibody clone IL3RA/1531 demonstrates strong staining in a distinct population of cells, with prominent membranous and cytoplasmic signal contrasting with the largely negative surrounding lymphoid cells. HIER was performed by boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9 for 10-20 min followed by cooling. The selective staining demonstrates detection of IL3RA by this IL3RA Monoclonal Antibody in human lymph node.



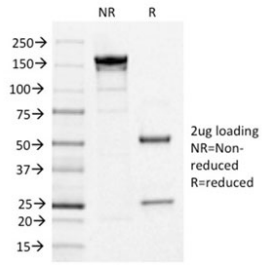
CD123 Antibody IL3RA/1531 in Human Tonsil IHC. Immunohistochemistry of FFPE human tonsil tissue using CD123 Antibody clone IL3RA/1531 demonstrates distinct staining of scattered cells distributed throughout the lymphoid tissue, while most surrounding lymphocytes remain comparatively unstained. HIER was performed by boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9 for 10-20 min followed by cooling. The discrete positive-cell population demonstrates detection of IL3RA by this IL3RA Monoclonal Antibody in human tonsil.



CD123 Antibody IL3RA/1531 in Human Gastric Carcinoma IHC. Immunohistochemistry of FFPE human gastric carcinoma tissue using CD123 Antibody clone IL3RA/1531 demonstrates strong staining across a substantial population of tumor cells, with prominent membranous and cytoplasmic signal and comparatively little staining in intervening stromal areas. HIER was performed by boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9 for 10-20 min followed by cooling. The robust tumor-cell staining demonstrates detection of IL3RA by this IL3RA Monoclonal Antibody in human gastric carcinoma.



CD123 Antibody IL3RA/1531 Protein Microarray Validated. HuProt protein microarray analysis of CD123 Antibody clone IL3RA/1531 against more than 19,000 full-length human proteins identifies CD123 as the dominant target, with a Z-score of 134.65 and an S-score of 109.49. The Z-score measures signal strength in standard deviations above the mean array signal, while the S-score measures separation between the intended target and the next highest-ranking protein. The exceptionally large separation of CD123 from the remaining proteins provides strong specificity evidence for this IL3RA Monoclonal Antibody.



CD123 Antibody IL3RA/1531 Purity by SDS-PAGE. SDS-PAGE analysis of purified, BSA-free CD123 Antibody clone IL3RA/1531 with a 2 ug load demonstrates an intact immunoglobulin species at approximately 150 kDa under non-reducing conditions. Under reducing conditions, the antibody resolves into prominent heavy- and light-chain bands at approximately 50 kDa and 25 kDa, respectively. The clean banding pattern provides confirmation of the integrity and purity of this IL3RA Monoclonal Antibody preparation.

Description

CD123 Antibody IL3RA/1531 recognizes CD123, the alpha subunit of the interleukin 3 receptor encoded by the IL3RA gene. CD123 is a type I transmembrane glycoprotein that provides the ligand-binding component of the IL-3 receptor and contributes to regulation of hematopoietic cell survival, proliferation, and differentiation. Expression of CD123 is found among several hematopoietic cell populations, reflecting the importance of IL-3 signaling in blood-cell development and immune regulation.

CD123 binds IL-3 with relatively low affinity when expressed independently. Association with the common beta subunit CSF2RB (CD131) forms the functional high-affinity IL-3 receptor complex. CSF2RB is also shared by the receptor systems for GM-CSF and IL-5. Ligand-induced receptor activation initiates intracellular signaling through pathways including JAK-STAT, PI3K-AKT, and MAPKs, linking IL-3 recognition to changes in cellular survival, proliferation, and differentiation.

IL3RA expression is associated with hematopoietic progenitor cells and several myeloid and immune-cell populations. CD123 is also studied extensively in hematologic malignancies because altered or elevated expression can occur in neoplastic hematopoietic cells, including populations associated with acute myeloid leukemia and certain other myeloid

disorders. Its cell-surface localization and role in cytokine responsiveness have made CD123 an important subject in studies of normal hematopoiesis, immune-cell biology, and malignant hematopoietic development.

Clone IL3RA/1531 is a mouse monoclonal antibody generated against recombinant human IL3RA protein. The antibody has also been evaluated on a HuProt protein microarray containing more than 19,000 full-length human proteins to assess target specificity. As an IL3RA Monoclonal Antibody, clone IL3RA/1531 provides a defined reagent for investigating the alpha subunit of the IL-3 receptor and its relationship to hematopoietic and immune-cell regulation. NSJ Bioreagents supplies IL3RA/1531 for research use only.

A CD123 Antibody can be used to investigate IL3RA expression and molecular mechanisms connecting IL-3 receptor signaling, hematopoietic development, immune-cell regulation, and hematologic disease.

Explore our CD Antibodies page for additional antibodies targeting leukocyte differentiation antigens and cell-surface proteins involved in immune-cell signaling and regulation.

Application Notes

Optimal dilution of the CD123 Antibody IL3RA/1531 / IL3RA Monoclonal Antibody should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

A portion of amino acids 26-171 was used as the immunogen for the CD123 Antibody IL3RA/1531.

Storage

Store the CD123 Antibody IL3RA/1531 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CD123 antibody, IL3RA antibody, IL-3RA antibody, IL3R alpha antibody, IL-3R alpha antibody, interleukin 3 receptor alpha antibody, interleukin-3 receptor alpha antibody, interleukin 3 receptor alpha chain antibody, IL-3 receptor alpha chain antibody

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