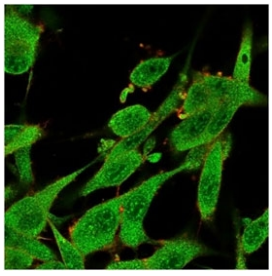
IL-7 Antibody IL7/4012 / Interleukin 7 Monoclonal Antibody [clone IL7/4012] (V9628)

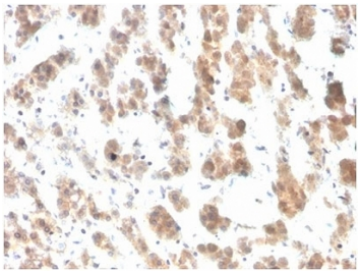
Catalog No.	Formulation	Size
V9628-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9628-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9628SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

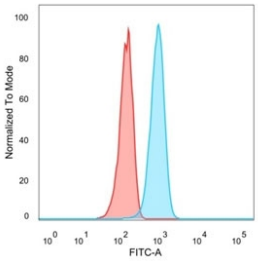
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	IL7/4012
Purity	Protein A/G affinity
UniProt	P13232
Localization	Secreted
Applications	Flow cytometry: 1-2ug/million cells Immunofluorescence: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This IL-7 Antibody IL7/4012 / Interleukin 7 Monoclonal Antibody is available for research use only.



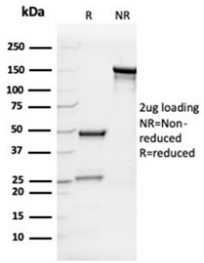
IL-7 Antibody IL7/4012 by IF in Human U-87 MG Cells. Immunofluorescence staining of PFA-fixed human U-87 MG glioblastoma cells using IL-7 Antibody IL7/4012. Green fluorescence is distributed throughout the cytoplasm, with granular staining and variable intensity among individual cells. Red phalloidin staining highlights filamentous actin and cellular morphology. The Interleukin 7 Monoclonal Antibody produces a predominantly cytoplasmic staining pattern, with little fluorescence observed in the nuclear regions.



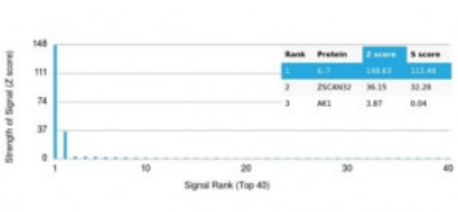
IL-7 Antibody IL7/4012 by IHC in Human Adrenal Gland. Immunohistochemistry of FFPE human adrenal gland tissue using IL-7 Antibody IL7/4012. Brown cytoplasmic staining is observed in groups of adrenal cells, with variable staining intensity across the tissue section. The Interleukin 7 Monoclonal Antibody highlights numerous cells exhibiting moderate to strong cytoplasmic immunoreactivity, while other regions show comparatively weaker staining. Nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed using 10 mM Tris with 1 mM EDTA, pH 9, for 20 minutes, followed by cooling before staining.



IL-7 Antibody IL7/4012 by FACS in Human U-87 MG Cells. Flow cytometry analysis of PFA-fixed human U-87 MG cells using IL-7 Antibody IL7/4012. The blue histogram representing antibody staining exhibits a pronounced rightward fluorescence shift relative to the red isotype control histogram. The two populations show clear separation, with antibody-treated cells displaying substantially greater fluorescence intensity. The Interleukin 7 Monoclonal Antibody demonstrates immunoreactivity in fixed U-87 MG cells under the tested conditions.



IL-7 Antibody IL7/4012 by SDS-PAGE. SDS-PAGE analysis of purified, BSA-free IL-7 Antibody IL7/4012 under reducing (R) and non-reducing (NR) conditions, with 2 ug of antibody loaded per lane. The non-reducing lane shows a prominent band migrating at approximately 130-150 kDa, consistent with intact IgG. Under reducing conditions, distinct bands are observed near 50 kDa and 25 kDa, corresponding to the immunoglobulin heavy and light chains, respectively. The Interleukin 7 Monoclonal Antibody demonstrates the expected electrophoretic profile of a purified mouse monoclonal antibody preparation.



IL-7 Antibody IL7/4012 by Protein Microarray Analysis. HuProt protein microarray analysis of IL-7 Antibody IL7/4012 against more than 19,000 full-length human proteins. The graph displays the ranked antibody-binding signals, with the strongest signal clearly separated from the remaining proteins. The Interleukin 7 Monoclonal Antibody demonstrates preferential recognition of its intended target in this protein microarray assay. The Z-score represents signal intensity relative to the array background, while the S-score reflects the separation between the intended target and the next-highest ranked protein.

Description

IL-7 Antibody IL7/4012 recognizes interleukin 7 (IL-7), a secreted cytokine essential for lymphocyte development, survival, and immune homeostasis. Encoded by the IL7 gene on chromosome 8, this protein is produced primarily by nonhematopoietic stromal and epithelial cells in lymphoid and peripheral tissues. IL-7 plays a central role in maintaining the T cell compartment by supporting the survival of naive and memory T lymphocytes. It is also important for early lymphoid development, particularly during the maturation of T cell precursors in the thymus. Unlike many cytokines produced predominantly by activated immune cells, IL-7 is generally supplied by the tissue microenvironment.

Interleukin 7 signals through a heterodimeric receptor composed of IL7R alpha (CD127) and the common gamma chain (CD132), which is shared with several other cytokine receptors. Receptor engagement activates JAK1 and JAK3, leading to phosphorylation of STAT5 and regulation of genes involved in lymphocyte survival and proliferation. IL-7 signaling promotes expression of antiapoptotic proteins, including BCL2, and helps maintain peripheral T cell populations during periods of limited antigen stimulation. The cytokine also contributes to lymphocyte metabolic fitness and homeostatic proliferation, making it a key regulator of adaptive immune function.

IL-7 is widely investigated in immunodeficiency, chronic infection, cancer immunology, and immune reconstitution.

Disruption of IL-7 receptor signaling can cause severe defects in T cell development, while altered IL-7 availability may influence lymphocyte recovery following chemotherapy or hematopoietic stem cell transplantation. Elevated IL-7 signaling has also been implicated in certain lymphoid malignancies, particularly T cell acute lymphoblastic leukemia. Because IL-7 influences both immune cell survival and population maintenance, it is an important target in studies of cytokine signaling, lymphocyte biology, and therapeutic immune modulation.

NSJ Bioreagents offers mouse monoclonal clone IL7/4012 for investigating human interleukin 7 expression. The antibody was developed using a recombinant protein fragment within amino acids 27-177 of human IL-7 and is supported by immunohistochemistry, immunofluorescence, flow cytometry, and protein microarray validation data. The Interleukin 7 Monoclonal Antibody provides a reagent for studying cytokine expression and its relationship to immune regulation. An IL-7 Antibody such as IL7/4012 supports investigations of lymphocyte development, immune homeostasis, and cytokine-associated disease.

Explore our Cytokine Antibodies for investigating interleukin signaling, lymphocyte development, immune homeostasis, and inflammatory responses.

Application Notes

Optimal dilution of the IL-7 Antibody IL7/4012 / Interleukin 7 Monoclonal Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 27-177 was used as the immunogen for the IL-7 Antibody IL7/4012.

Storage

Aliquot the IL-7 Antibody IL7/4012 and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Interleukin 7 antibody, IL7 antibody, IL-7 antibody, Lymphopoietin 1 antibody, Lymphopoietin-1 antibody, IL7 cytokine antibody

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