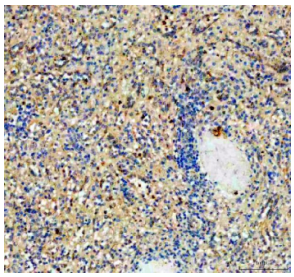
NCR3 Antibody / Natural cytotoxicity receptor 3 (FY13326)

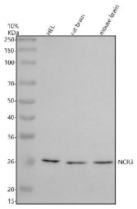
Catalog No.	Formulation	Size
FY13326	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O14931
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml
Limitations	This NCR3 antibody is available for research use only.



Immunohistochemical staining of NCR3 using anti-NCR3 antibody. NCR3 was detected in a paraffin-embedded section of human spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-NCR3 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Western blot analysis of NCR3 using anti-NCR3 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human HEL whole cell lysates, Lane 2: rat brain tissue lysates, Lane 3: mouse brain tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NCR3 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. A single band is detected at an approximately 26 kDa in all samples, running above the predicted ~22 kDa mass but consistent with the higher apparent molecular weight expected for the glycosylated form of the NK cell receptor NCR3.

Description

NCR3 antibody detects Natural cytotoxicity receptor 3, an activating receptor expressed on the surface of natural killer (NK) cells that mediates cytotoxic responses against virus-infected and tumor cells. The UniProt recommended name is Natural cytotoxicity receptor 3 (NCR3). Also known as NKp30, this receptor is a member of the immunoglobulin superfamily and plays a key role in innate immune surveillance and antitumor defense.

Functionally, NCR3 antibody identifies a 190-amino-acid type I transmembrane protein containing a single extracellular immunoglobulin-like domain responsible for ligand recognition. NCR3 binds to several cellular and pathogen-derived ligands, including B7-H6, BAG6, and viral hemagglutinin, triggering NK cell activation and cytotoxic granule release. Engagement of NCR3 leads to downstream signaling through the ITAM-containing adaptor protein CD3 zeta, resulting in cytokine production (IFN-gamma, TNF-alpha) and target cell killing. Beyond its role in NK cells, NCR3 expression has also been detected in subsets of T cells and innate lymphoid cells, where it contributes to immune modulation and inflammation.

The NCR3 gene is located on chromosome 6p21.3 within the major histocompatibility complex (MHC) region. Expression is tightly regulated by cytokines such as IL-2 and IL-15, which promote NK cell activation and expansion. NCR3 activity is balanced by interactions with both activating and inhibitory receptors to maintain immune homeostasis.

Pathologically, dysregulated NCR3 signaling influences susceptibility to infections, tumor immune evasion, and autoimmune conditions. Reduced receptor expression or function can impair NK cell cytotoxicity, while overactivation contributes to tissue inflammation and autoimmunity. Elevated NCR3 activity has been reported in various cancers and viral infections, highlighting its importance as a biomarker for immune activation and immunotherapy potential. Research using NCR3 antibody supports studies in NK cell biology, tumor immunology, and antiviral defense.

NCR3 antibody is validated for use in relevant research applications to study receptor-mediated cytotoxicity and immune signaling. NSJ Bioreagents provides NCR3 antibody reagents optimized for investigations into NK cell activation, immunoreceptor signaling, and immune regulation.

Application Notes

Optimal dilution of the NCR3 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human NCR3 was used as the immunogen for the NCR3 antibody.

Storage

After reconstitution, the NCR3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at

-20oC. Avoid repeated freezing and thawing.

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