

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

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Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
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 Na ₂ HPO ₄ .
UniProt	O14931
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml
Limitations	This NCR3 antibody is available for research use only.

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 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.