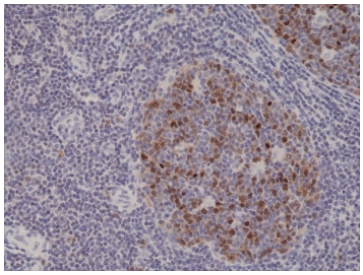
Recombinant Aurora B Antibody [clone RM278] (R20295)

Catalog No.	Formulation	Size
R20295-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

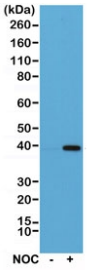
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM278
Purity	Protein A purified from animal origin-free supernatant
UniProt	Q96GD4
Gene ID	9212
Localization	Nuclear
Applications	Immunohistochemistry (FFPE) : 1:200-1:500 (1) Western Blot : 1:1000-1:2000
Limitations	This recombinant Aurora B antibody is available for research use only.



IHC testing of FFPE human tonsil tissue with recombinant Aurora B antibody at 1:1000.



Western blot of HeLa cell lysate, untreated (-) or treated (+) with Nocodazole (NOC), using recombinant Aurora B antibody at 1:1000. Predicted molecular weight: 39~45 kDa.

Description

The Recombinant Aurora B antibody is a recombinant reagent engineered to detect Aurora kinase B (AURKB), a serine/threonine kinase that plays a critical role in chromosome segregation and cytokinesis. Aurora B is a catalytic component of the chromosomal passenger complex (CPC), which also includes INCENP, Survivin, and Borealin. This complex ensures accurate chromosome alignment, kinetochore-microtubule attachment, and successful completion of cell division. The Recombinant Aurora B antibody provides sensitive and reproducible detection of AURKB, supporting studies of mitosis, cell cycle regulation, and cancer biology.

Aurora B is encoded by the AURKB gene located on chromosome 17p13.1. Structurally, it contains an N-terminal regulatory domain, a central catalytic kinase domain, and a C-terminal tail important for complex formation. During mitosis, Aurora B localizes to centromeres in early phases, where it regulates kinetochore-microtubule attachments by phosphorylating substrates such as histone H3 and kinetochore proteins. As cells progress to anaphase and telophase, Aurora B relocates to the central spindle and midbody, where it directs cytokinesis. The Recombinant Aurora B antibody enables precise tracking of this dynamic localization and expression throughout the cell cycle.

In western blotting, the Recombinant Aurora B antibody detects AURKB protein in dividing cells, providing a measure of kinase abundance under basal or experimental conditions. In immunofluorescence, it reveals punctate centromeric staining during metaphase and striking midbody localization during cytokinesis. In immunohistochemistry, it highlights elevated Aurora B expression in proliferative tissues and tumor samples. Recombinant production ensures lot-to-lot consistency, reducing variability and improving reproducibility compared with conventional hybridoma-derived antibodies.

Aurora B is indispensable for genomic stability, as defects in its regulation lead to aneuploidy, polyploidy, or failed cytokinesis. Aberrant overexpression or hyperactivation of AURKB is frequently observed in cancers, including colorectal, breast, and lung carcinomas, where it contributes to chromosomal instability and aggressive growth. For this reason, Aurora B inhibitors have been developed as potential anticancer agents. The Recombinant Aurora B antibody provides a robust tool for evaluating kinase expression and for monitoring therapeutic responses in preclinical models. Synonym terms such as recombinant AURKB antibody, recombinant mitotic kinase antibody, and recombinant chromosomal passenger complex kinase antibody enhance product discoverability.

By providing validated and reproducible detection, the Recombinant Aurora B antibody supports detailed studies of cell division and tumor biology. NSJ Bioreagents ensures stringent quality control for this reagent, giving scientists confidence in applications including western blotting, immunofluorescence, and immunohistochemistry. With specificity for AURKB, the Recombinant Aurora B antibody is an essential tool for advancing research into mitotic regulation, genomic stability, and cancer therapeutics.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Aurora B antibody may be required due to differences in protocols and secondary/substrate sensitivity.

1. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.

Immunogen

A peptide corresponding to the N-terminus of human Aurora kinase B was used as the immunogen for this recombinant Aurora B antibody.

Storage

Store the recombinant Aurora B antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).