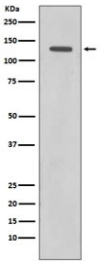
Rad21 / SCC1 Antibody [clone CBH-18] (RQ4748)

Catalog No.	Formulation	Size
RQ4748	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	CBH-18
Purity	Affinity purified
UniProt	O60216
Applications	Western blot: 1:500-1:1000
Limitations	This Rad21 / SCC1 Antibody is available for research use only.



Rad21 / SCC1 Antibody HeLa Cell WB. Western blot analysis of human HeLa cell lysate using Rad21 / SCC1 Antibody. An HRP-conjugated secondary antibody with ECL substrate was used for detection. Rad21 / SCC1 Antibody detects a prominent band at approximately 120 kDa, corresponding to the full-length RAD21 cohesin complex protein. RAD21 may also undergo proteolytic cleavage to generate smaller fragments, including reported 64-70 kDa products associated with cohesin regulation during chromosome separation.

Description

Rad21 / SCC1 Antibody recognizes RAD21, also known as SCC1, a core subunit of the cohesin complex required for sister chromatid cohesion, chromosome segregation, chromatin organization, and DNA repair. RAD21 functions as the kleisin component of the cohesin ring, physically linking SMC1 and SMC3 to form a structure that maintains sister chromatid pairing following DNA replication. During cell division, regulated cleavage of RAD21 by separase allows chromosome separation and accurate distribution of genetic material to daughter cells. Due to its essential role in chromosome dynamics, Rad21 / SCC1 Antibody is widely used to investigate cohesin complex biology, mitotic regulation,

and maintenance of genome stability.

Beyond chromosome segregation, RAD21/SCC1 contributes to higher-order chromatin organization by regulating DNA loop formation, enhancer-promoter interactions, and transcriptional control. Cohesin-mediated chromatin architecture is essential for proper gene expression programs, cellular differentiation, and genome organization. RAD21 also participates in the DNA damage response, particularly the repair of double-strand breaks through homologous recombination, where sister chromatid proximity is required for accurate repair. These functions connect RAD21 biology to both epigenetic regulation and DNA repair pathways.

Altered RAD21 expression and cohesin complex dysfunction have been associated with developmental disorders, genomic instability, and cancer progression. Increased RAD21 levels have been reported in several malignancies, where enhanced cohesin function may contribute to altered transcriptional programs, tumor growth, and resistance to DNA-damaging therapies. Mutations affecting RAD21 and related cohesin components are also associated with cohesinopathies, demonstrating the importance of precise regulation of chromosome architecture and genome maintenance.

Rad21 / SCC1 Antibody provides a valuable research tool for studying chromosome cohesion, mitotic progression, transcriptional regulation, DNA repair, and chromatin structure. For additional information about cohesin biology, validated applications, and related products, learn more about our RAD21 Antibody, a Cohesin Complex Protein Antibody for investigating chromosome organization, genome stability, and epigenetic regulation.

Application Notes

Optimal dilution of the Rad21 / SCC1 Antibodyy should be determined by the researcher.

Immunogen

A synthetic peptide specific to human Rad21 was used as the immunogen for the Rad21 / SCC1 Antibody.

Storage

Store the Rad21 / SCC1 Antibody at -20oC.

Alternate Names

RAD21 Antibody, Cohesin Complex Protein RAD21 Antibody, SCC1 Homolog Antibody, Double-Strand Break Repair Protein RAD21 Antibody, KIAA0078 Antibody, CDLS4 Antibody

Copyright © NSJ Bioreagents. All rights reserved.