BACKGROUND
Rad21 is one of the major cohesin subunits that holds sister chromatids together until anaphase, when proteolytic cleavage by separase, a caspase-like enzyme, allows chromosomal separation. Rad21 interacts with Rec8 to form a cohesin complex that functions in sister chromatid alignment. Rad21 is also involved in the repair of double-strand breaks in DNA and is essential for mitotic growth. Rad21 undergoes a C-terminal cleavage induced by diverse stimuli right before apoptosis. The cleavage product migrates to the cytoplasm and is involved in early events in the apoptotic pathway and it amplifies the cell death signal in a positive-feedback manner. The Rad21 gene is related to the invasion and metastasis of cancer cells, and Rad21 is a potential target for cancer therapeutics that may enhance the anti-tumor activity of chemotherapeutic agents acting through the induction of DNA damage.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: RAD21 (human) mapping to 8q24.11; Rad21 (mouse) mapping to 15 C.

SOURCE
Rad21 (B-2) is a mouse monoclonal antibody raised against amino acids 143-352 mapping within an internal region of Rad21 of human origin.

PRODUCT
Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE
Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS
Rad21 (B-2) is recommended for detection of Rad21 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Rad21 (B-2) is also recommended for detection of Rad21 in additional species, including equine, canine, bovine and porcine.


Molecular Weight of Rad21: 68 kDa.
Molecular Weight of phosphorylated Rad21: 110-120 kDa.

Positive Controls: MOLT-4 nuclear extract: sc-2151, HeLa nuclear extract: sc-2120 or NIH/3T3 nuclear extract: sc-2138.

RECOMMENDED SUPPORT REAGENTS
To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:100-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminal Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml).

DATA

SELECT PRODUCT CITATIONS

RESEARCH USE
For research use only, not for use in diagnostic procedures.