

## DIS3 (T-20): sc-84083

### BACKGROUND

The exosome is a multi-protein complex composed of several highly conserved subunits, some of which are 3' to 5' exoribonucleases. The complex is involved in a variety of cellular processes and is responsible for degrading unstable mRNAs that contain AU-rich elements (AREs) in their untranslated 3' regions. DIS3, also known as RRP44, is a 958 amino acid protein that localizes to both the cytoplasm and the nucleus and contains one PINc domain. Widely expressed with highest expression in testis, DIS3 functions as a component of the exosome exoribonuclease complex and is required for processing of 7S pre-rRNA into a mature nuclear complex and, ultimately, for proper mitotic progression. Abnormal expression levels of DIS3 may be associated with colon cancer, suggesting a role for DIS3 in tumorigenesis. Multiple isoforms of DIS3 exist due to alternative splicing events.

### REFERENCES

1. Shiomi, T., et al. 1998. Human dis3p, which binds to either GTP- or GDP-Ran, complements *Saccharomyces cerevisiae* DIS3. *J. Biochem.* 123: 883-890.
2. Chen, C.Y., et al. 2001. AU binding proteins recruit the exosome to degrade ARE-containing mRNAs. *Cell* 107: 451-464.
3. Brouwer, R., et al. 2001. Three novel components of the human exosome. *J. Biol. Chem.* 276: 6177-6184.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607533. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

### CHROMOSOMAL LOCATION

Genetic locus: DIS3 (human) mapping to 13q22.1.

### SOURCE

DIS3 (T-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of DIS3 of human origin.

### PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84083 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

### APPLICATIONS

DIS3 (T-20) is recommended for detection of DIS3 of human and rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

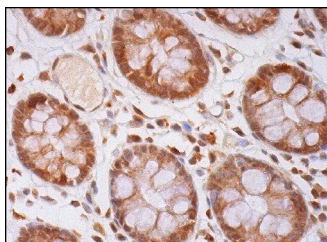
DIS3 (T-20) is also recommended for detection of DIS3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for DIS3 siRNA (h): sc-105297, DIS3 shRNA Plasmid (h): sc-105297-SH and DIS3 shRNA (h) Lentiviral Particles: sc-105297-V.

Molecular Weight of DIS3: 110 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132 or SW480 nuclear extract: sc-2155.

### DATA



DIS3 (T-20): sc-84083. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing nuclear staining of glandular cells and endothelial cells.

### SELECT PRODUCT CITATIONS

1. Porro, A., et al. 2010. Molecular dissection of telomeric repeat-containing RNA biogenesis unveils the presence of distinct and multiple regulatory pathways. *Mol. Cell. Biol.* 30: 4808-4817.

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Try **DIS3 (H-3): sc-398663**, our highly recommended monoclonal alternative to DIS3 (T-20).