SANTA CRUZ BIOTECHNOLOGY, INC.

# NuMA (C-20): sc-18557

## BACKGROUND

There are a multitude of structural components in the nucleus that sustain proper structure and function relationships with respect to nuclear assembly and mitosis. The human nuclear mitotic apparatus protein gene, also designated NuMA, maps to chromosome 11q13.4 and encodes a noncentrosomal protein. NuMA possesses microtubule (MT) binding capacity via its carboxyl terminal region and is involved in spindle pole organization. NuMA is essential for the organization and stabilization of spindle poles from early mitosis until at least the onset of anaphase. During interphase, NuMA is present throughout the nucleus and upon entering mitosis, localizes to the spindle apparatus. During mitosis, NuMA forms aggregates that interact with microtubules and certain motor proteins and as a result may draw together the minus-ends of microtubules, thereby helping to organize them into a bipolar spindle. In contrast to mitotic cells, post-mitotic neurons display NuMA both in the nucleus and in the cytoplasm. Elevated levels of NuMA expression have been reported in cancer patients, particularly in colorectal carcinoma and early colorectal cancers.

## CHROMOSOMAL LOCATION

Genetic locus: NUMA1 (human) mapping to 11q13.4.

## SOURCE

NuMA (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of NuMA of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18557 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.

## APPLICATIONS

NuMA (C-20) is recommended for detection of NuMA of 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), 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).

Suitable for use as control antibody for NuMA siRNA (h): sc-43978, NuMA shRNA Plasmid (h): sc-43978-SH and NuMA shRNA (h) Lentiviral Particles: sc-43978-V.

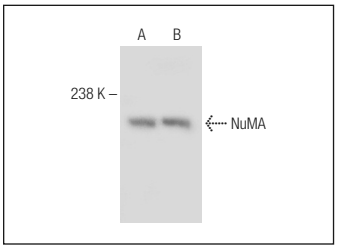
Molecular Weight of NuMA: 240 kDa.

Positive Controls: CCRF-CEM nuclear extract: sc-2146, Jurkat nuclear extract: sc-2132 or HeLa nuclear extract: sc-2120.

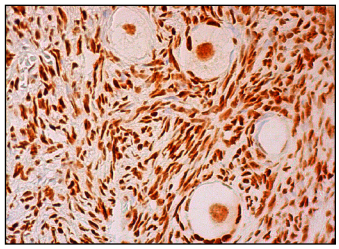
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA




NuMA (C-20): sc-18557. Western blot analysis of NuMA expression in CCRF-CEM (**A**) and Jurkat (**B**) nuclear extracts.



NuMA (C-20): sc-18557. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing nuclear staining of follicle cells and ovarian stroma cells.

## SELECT PRODUCT CITATIONS


1. Nguyen, C.L., et al. 2009. Human papillomavirus E7 protein deregulates mitosis via an association with nuclear mitotic apparatus protein 1. J. Virol. 83: 1700-1707.
2. Ozlü, N., et al. 2010. Binding partner switching on microtubules and aurora-B in the mitosis to cytokinesis transition. Mol. Cell. Proteomics 9: 336-350.


## RESEARCH USE

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

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.