**BACKGROUND**

DNA damage or incomplete replication of DNA results in the inhibition of cell cycle progression at the G1 to S or G2 to M phase checkpoints by conserved regulatory mechanisms. RHINO (RAD9-HUS1-RAD1 interacting nuclear orphan 1), also known as RHNO1, C12orf32 or HKMT1188, is a 238 amino acid protein that plays a central role in DNA damage response and in cell cycle regulation. Strongly expressed in breast cancer cells and weakly expressed in testis, prostate, ovary, thymus and small intestine, RHINO is recruited to DNA damaged sites through interaction with 9-1-1 cell-cycle checkpoint response complex and ATR activator TopBP1. RHINO is required for cell cycle progression, specifically during G1 to S phase transition. RHINO exists as two alternatively spliced isoforms and is encoded by a gene located on human chromosome 12p13.33.

**REFERENCES**

7. SWISS-PROT/TrEMBL (Q9BSD 3). World Wide Web URL: http://www.uniprot.org

**CHROMOSOMAL LOCATION**

Genetic locus: RHNO1 (human) mapping to 12p13.33; Rhno1 (mouse) mapping to 6 F3.

**SOURCE**

RHNO1 (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RHNO1 of human origin.

**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.

**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-241232 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

RHINO (P-16) is recommended for detection of RHINO of human origin and Rhno1 of mouse origin and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

RHINO (P-16) is also recommended for detection of RHINO in additional species, including equine, canine and bovine.

Suitable for use as control antibody for RHINO siRNA (h): sc-95847, Rho1 siRNA (m): sc-140416, RHINO shRNA Plasmid (h): sc-95847-SH, Rhno1 shRNA Plasmid (m): sc-140416-SH, RHINO shRNA (h) Lentiviral Particles: sc-95847-V and Rhno1 shRNA (m) Lentiviral Particles: sc-140416-V.

Molecular Weight of RHINO: 35 kDa.

**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: 1:2000-1:10,000) 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-2033 and Western Blotting Luminol Reagent: sc-2048. 2) 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.

**PROTOCOLS**

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