Cdc123 (A-2): sc-390989

BACKGROUND
The eukaryotic cell division cycle consists of a number of gene-controlled sequences that involve cyclin dependent kinases (Cdks) and cell division control (Cdc) proteins. Cdc123 (cell division cycle protein 123), also known as D123, is a 336 amino acid cytoplasmic protein that is involved in cell cycle control. Widely expressed with high expression in thymus, spleen, ovary, testis, small intestine and leukocytes, Cdc123 functions to destabilize Chfr (checkpoint with forkhead and ring finger domain) proteins which, when accumulated, block the G to S phase transition. Cdc123 prevents the Chfr proteins from collecting in the cell, thereby allowing the cell to enter the S phase. Due to its role in cell cycle control, Cdc123 is thought to be a basal marker for luminal breast cancers.

REFERENCES
3. Okuda, A., et al. 1999. Extensive degradation of mutant-type D123 protein sequences that involve cyclin dependent kinases (Cdks) and cell division control proteins. Cdc123 (A-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 289-318 near the C-terminus of Cdc123 of human origin.

PRODUCT
Each vial contains 200 µg IgG kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Blocking peptide available for competition studies, sc-390989 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS
Cdc123 (A-2) is recommended for detection of Cdc123 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:1000-1:10000), 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).

Suitable for use as control antibody for Cdc123 siRNA (h): sc-90774, Cdc123 siRNA (m): sc-142205, Cdc123 shRNA Plasmid (h): sc-90774-SH, Cdc123 shRNA Plasmid (m): sc-142205-SH, Cdc123 shRNA (h) Lentiviral Particles: sc-90774-V and Cdc123 shRNA (m) Lentiviral Particles: sc-142205-V.

Molecular Weight of Cdc123: 39 kDa.
Positive Controls: Cdc123 (m3): 293T Lysate: sc-126610, AML-193 whole cell lysate: sc-364182 or U-87 MG cell lysate: sc-2411.

RECOMMENDED SUPPORT REAGENTS
To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminal Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG BP-FITC: sc-91640 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-35850.

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.