**BACKGROUND**

p53, a DNA-binding, oligomerization domain- and transcription activation domain-containing tumor suppressor, upregulates growth arrest and apoptosis-related genes in response to stress signals, thereby influencing programmed cell death, cell differentiation and cell cycle control mechanisms. PRPK (p53-related protein kinase), also known as TP53RK, is a 253 amino acid protein kinase that phosphorylates Ser15 of p53. PRPK phosphorylation of p53 causes increased stabilization and activity of p53. CGI-121 may act as an inhibitor of the PRPK-p53 interaction, thus preventing the phosphorylation of p53. Unphosphorylated p53 is degraded by the ubiquitin-proteasome pathway, which may ultimately lead to cell proliferation. PRPK contains a protein kinase domain with a conserved catalytic core. PRPK is localized to the nucleus of the cell and is highly expressed in testis, with lower expression in heart, kidney and spleen.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: TP53RK (human) mapping to 20q13.12; Trp53rkb (mouse) mapping to 2 H3.

**SOURCE**

PRPK (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 234-250 at the C-terminus of PRPK 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.

PRPK (C-1) is available conjugated to agarose (sc-514703 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514703 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514703 PE), fluorescein (sc-514703 FITC), Alexa Fluor® 488 (sc-514703 AF488), Alexa Fluor® 546 (sc-514703 AF546), Alexa Fluor® 594 (sc-514703 AF594) or Alexa Fluor® 647 (sc-514703 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514703 AF680) or Alexa Fluor® 790 (sc-514703 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514703 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

**APPLICATIONS**

PRPK (C-1) is recommended for detection of PRPK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).


Molecular Weight of PRPK: 28 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HEP G2 cell lysate: sc-2227 or HT-1080 whole cell lysate: sc-364183.

**RECOMMENDED SUPPORT REAGENTS**

To enable 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-PE: sc-516140 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-359850.

**DATA**

**SELECT PRODUCT CITATIONS**


**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.