



Technical Data Sheet

Diagenode sa
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Product name:
antibody directed against p53
(Cellular tumor antigen p53)

Other names: Tumor suppressor p53,
Phosphoprotein p53, Antigen NY-CO-13, TP53

Catalog #: pAb-083-050	Type: Polyclonal	ChIP grade	Size: 50 µg/ 50 µl
Lot #: A61-001	Source: Rabbit		Concentration: 1 µg/µl

Description: This antibody has been raised in rabbits against human p53, using a C-terminal KLH-conjugated synthetic peptide.

Specificity: Human: positive
Other species: not tested

Applications	Suggested dilution/amount	References
ELISA	1:100 – 1:1,000	Fig 1
Dot blotting	Not tested	
Western blotting	Not tested	
Gel Supershift	Not tested	
Immunochemistry	Not tested	
Flow cytometry	Not tested	
Immunoprecipitation	Not tested	
ChIP	2 µg/ChIP	Fig 2

Format: Polyclonal, affinity purified antibody in PBS containing 0.05% azide and 0.05% ProClin 300.

Storage: Store at -20°C/ -80°C. Avoid multiple freeze-thaw cycles.

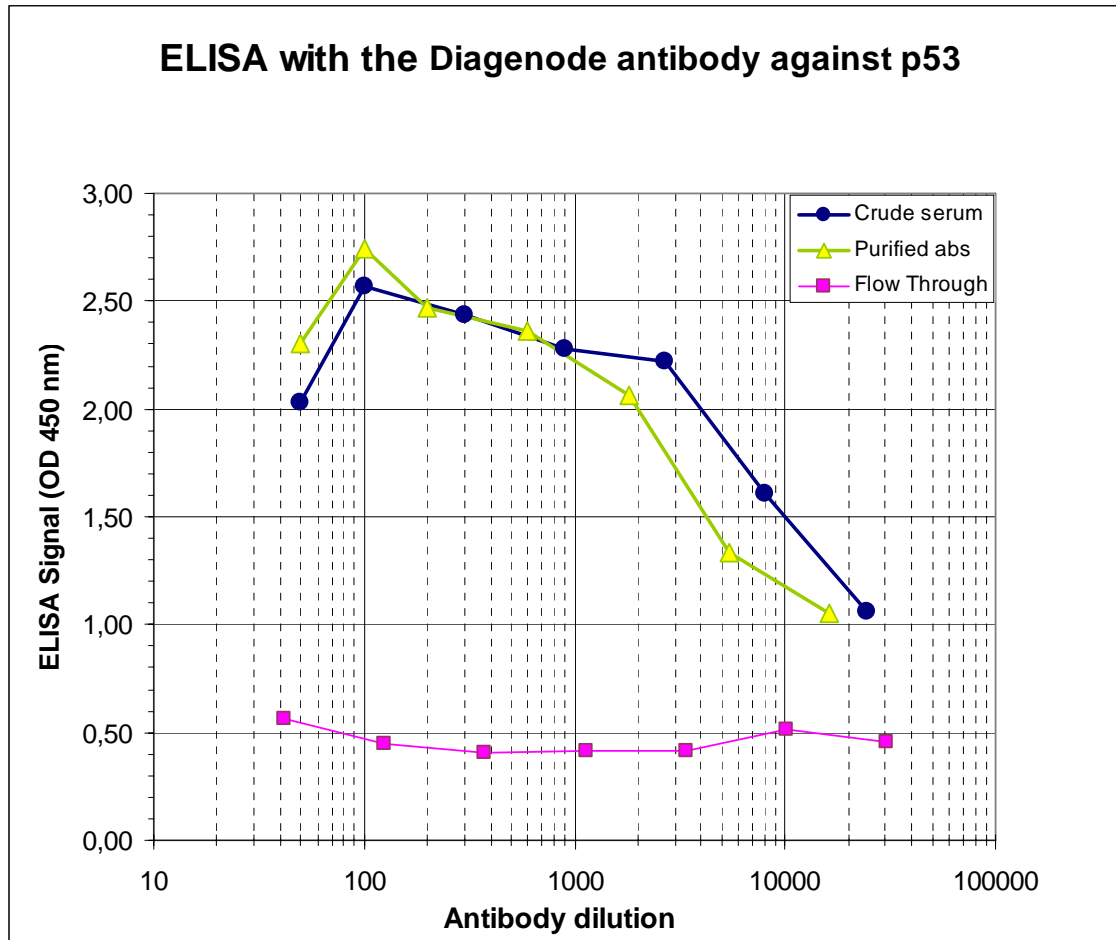
Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.

References:

(1) Bunz F, Dutriaux A, Lengauer C, Waldman T, Zhou S, Brown JP, Sedivy JM, Kinzler KW, Vogelstein B (1998) Requirement for p53 and p21 to sustain G2 arrest after DNA damage. Science 282: 1497-1501

Availability date: May 12, 2008. Last data sheet update: May 07, 2008

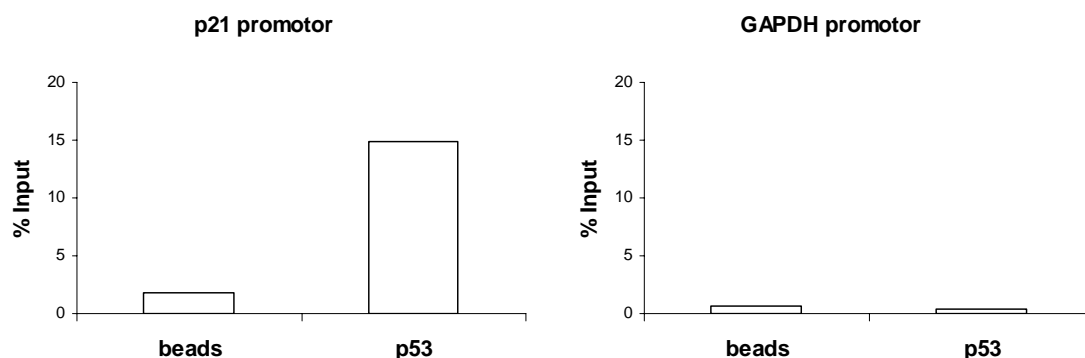
Figure 1



Determination of the antibody titer

To determine the titer of the antibody, an ELISA was performed using a serial dilution of Diagenode affinity purified antibody directed against human p53 (cat# pAb-083-050), crude serum and flow through in antigen coated wells. By plotting the absorbance against the antibody dilution (Figure 1), the titer of the purified antibody was estimated to be 1:4,000.

Figure 2



ChIP results obtained with the Diagenode antibody directed against p53

ChIP assays were performed using the human osteosarcoma cell line U2OS, the Diagenode antibody directed against p53 (cat# pAb-083-050) and optimized PCR primer sets for PCR. Chromatin sheared from 1x10e6 cells and 2 µg of antibody against p53, or beads only were used per ChIP experiment.

Figure 2 shows the recovery expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

Left: recovery by p53 of the p21 promoter, a known target for p53 (1), or beads only. Recovery of the p21 promoter by the p53 antibody is evident based on fluorescent qPCR analysis of immunoprecipitated DNA.

Right: recovery of the GAPDH promoter (used as a negative control) by p53 or beads only.

Overview

The transcription factor p53 (UniProt/Swiss-Prot entry P04637) is a tumour suppressor that regulates the cellular response to diverse cellular stresses. Upon activation, p53 induces several target genes which leads to cell cycle arrest and DNA repair, or alternatively, to apoptosis. In unstressed cells, p53 is kept inactive by the ubiquitin ligase MDM2 which inhibits the activity and promotes the degradation. Mutations in p53 are involved in a vast majority of human cancers.