

Rabbit anti-human TP53 Polyclonal Antibody

Catalog Number: R16016P

General Information	
Immunogen	Recombinant protein of human TP53
IgG type	IgG
Clonality	Polyclonal
Specificity	human TP53
Applications & dilution	WB 1:500 - 1:2000 IF 1:50 - 1:200 ChIP 1:20 - 1:100 ChIPseq 1:20 - 1:100
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Purity	≥95% purity by SDS-PAGE
Storage	Store at -20°C. Avoid freeze / thaw cycles.
Abbreviation: ELISA: Enzyme-linked immunosorbent assay; ITA: immunoturbidimetric assay; IP: immunoprecipitation; IHC: immunohistochemistry; IF: immunofluorescence. WB: western blot; FC: flowcytometry	

Background

The TP53 tumor suppressor protein plays a major role in cellular response to DNA damage and other genomic aberrations. Activation of TP53 can lead to either cell cycle arrest and DNA repair or apoptosis. TP53 is phosphorylated at multiple sites *in vivo* and by several different protein kinases *in vitro*. DNA damage induces phosphorylation of TP53 at Ser15 and Ser20 and leads to a reduced interaction between TP53 and its negative regulator, the oncoprotein MDM2. MDM2 inhibits TP53 accumulation by targeting it for ubiquitination and proteasomal degradation. TP53 can be phosphorylated by ATM, ATR, and DNA-PK at Ser15 and Ser37. Phosphorylation impairs the ability of MDM2 to bind TP53, promoting both the accumulation and activation of TP53 in response to DNA damage. Chk2 and Chk1 can phosphorylate TP53 at Ser20, enhancing its tetramerization, stability, and activity. TP53 is phosphorylated at Ser392 *in vivo* and by CAK *in vitro*. Phosphorylation of TP53 at Ser392 is increased in human tumors and has been reported to influence the growth suppressor function, DNA binding, and transcriptional activation of TP53. TP53 is phosphorylated at Ser6 and Ser9 by CK1δ and CK1ε both *in vitro* and *in vivo*. Phosphorylation of TP53 at Ser46 regulates the ability of TP53 to induce apoptosis. Acetylation of TP53 is mediated by p300 and CBP acetyltransferases. Inhibition of deacetylation suppressing MDM2 from recruiting HDAC1 complex by p19 (ARF) stabilizes TP53. Acetylation appears to play a positive role in the accumulation of TP53 protein in stress response.

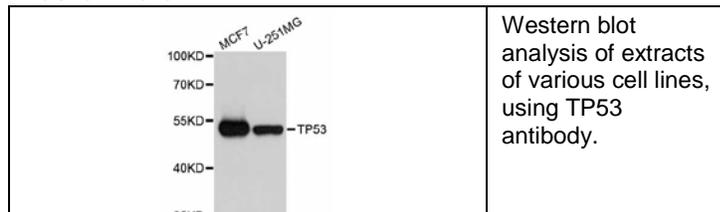
For research use only

Preparation

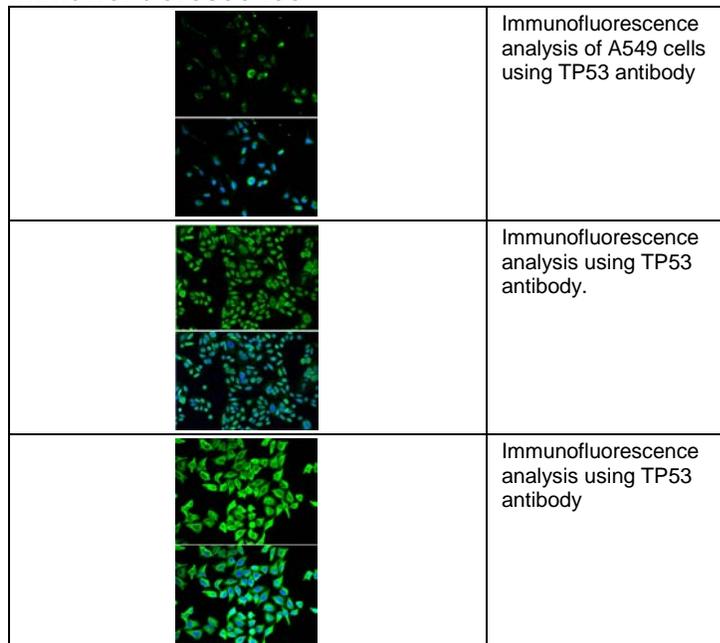
Polyclonal antibody is produced by immunizing rabbit with recombinant protein of human TP53 and purified using protein A resin.

Applications

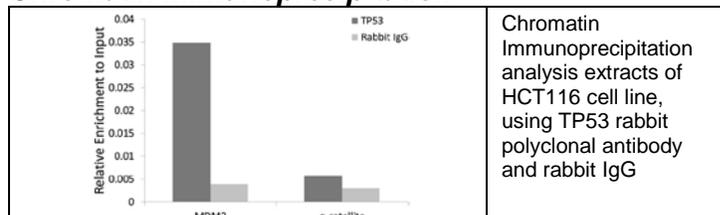
Western blot



Immunofluorescence



Chromatin Immunoprecipitation



Storage

This antibody is shipped at 4 °C. This product is stable for 12 months from date of receipt when stored at -20 °C to -70 °C. Avoid freeze/thaw cycles.

Hazard/Biohazard

This antibody contains 0.09% sodium azide as preservative. Please handle and dispose the product properly. No known biohazard is associated with this product.

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