

Anti-p53 (MOUSE) Monoclonal Antibody - 200-301-174
Code: 200-301-174

Size: 100 µg

Product Description: Anti-p53 (MOUSE) Monoclonal Antibody - 200-301-174

Concentration: 1.0 mg/mL by UV absorbance at 280 nm

PhysicalState: Liquid (sterile filtered)

Label	Unconjugated
Host	Mouse
Gene Name	TP53
Species Reactivity	human
Buffer	0.02 M Potassium Phosphate, 0.5 M Sodium Chloride, pH 7.2
Stabilizer	None
Preservative	0.01% (w/v) Sodium Azide
Storage Condition	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Synonyms	mouse anti-p53 antibody, mouse anti-Tumor Suppressor p53 antibody, Phosphoprotein p53 antibody, TP53 antibody, Transformation related protein 53 antibody, TRP53 antibody, cellular Tumor antigen p53 antibody
Application Note	This antibody is suitable for ChIP, flow cytometry, immunohistochemistry, Immunofluorescence, immunoblotting and immunoprecipitation. p53 is the most commonly mutated gene in spontaneously occurring human cancers. Mutations arise with an average frequency of 70% but incidence varies from zero in carcinoid lung tumors to 97% in primary melanomas. High concentrations of p53 protein are transiently expressed in human epidermis and superficial dental fibroblasts following mild ultraviolet irradiation. This antibody reacts with an N-terminal epitope of the 53 kD gene product and this epitope is not destroyed by formalin-fixation and routine paraffin embedding. Microwaving is needed for optimal staining.
Background	The p53 gene like the Rb gene, is a tumor suppressor gene. The encoded protein responds to diverse cellular stresses to regulate expression of target genes, thereby inducing cell cycle arrest, apoptosis, senescence, DNA repair, or changes in metabolism; its activity stops the formation of tumors. If a person inherits only one functional copy of the p53 gene from their parents, they are pre-disposed to cancer and usually develop several independent tumors in a variety of tissues in early adulthood. This condition is rare, and is known as Li-Fraumeni syndrome. However, mutations in p53 are found in most tumor types, and so contribute to the complex network of molecular events leading to tumor formation. Anti-p53 Antibody is ideal for investigators involved in Signaling Proteins, Cell Cycle Proteins, Apoptosis/Autophagy, Cancer, Cardiovascular Disease, Cell Cycle, Cellular Stress, Inflammation, JNK/SAPK Pathway, Metabolic Disorder, Neurobiology, and p38 Pathway research.
Purity And Specificity	This protein A purified mouse monoclonal antibody reacts specifically with p53 in human tissues and cell lines. The antibody recognizes a 53 kDa band corresponding to p53. Cross reactivity with p53 from other sources has not been determined.
Assay Dilutions	User Optimized
ELISA	1:2,000 - 1:10,000
Western Blot	1:500 - 1:2,000
Immunohistochemistry	1:50
IF Microscopy	1:100-1:500
ChIP	1 µg/µL at 4° o/n
Other Assays	User Optimized
Expiration	Expiration date is one (1) year from date of opening.
Immunogen	This protein A purified monoclonal antibody was produced by repeated immunizations with recombinant human p53 protein.

Specific Reference

Gurney, E. G. et al (1980) Monoclonal antibodies against simian virus 40 T antigens: evidence for distinct subclasses of large T antigen and for similarities among nonviral T antigens. *J Virol*, 34(3):752-63. Hollstein, M, et al. (1991) p53 mutations in human cancers. *Science*, 253: 49-53. Lane, D.P. (1992) p53, guardian of the genome. *Nature*, 358(6381):15-16

Related Products

100-401-156	Anti-Cyclin E (RABBIT) Antibody - 100-401-156
200-301-400	Anti-ATM Protein Kinase pS1981 (MOUSE) Monoclonal Antibody - 200-301-400
200-401-222	Anti-Bcl-2 (RABBIT) Antibody - 200-401-222
610-4302	Anti-MOUSE IgG (H&L) (RABBIT) Antibody Peroxidase Conjugated - 610-4302

Related Links

NCBI - 23491729

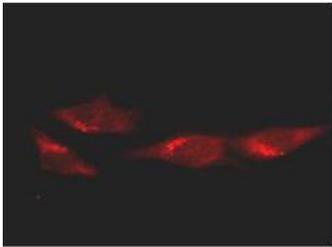
<http://www.ncbi.nlm.nih.gov/protein/23491729>

UniProtKB - P04637 <http://www.uniprot.org/uniprot/P04637>

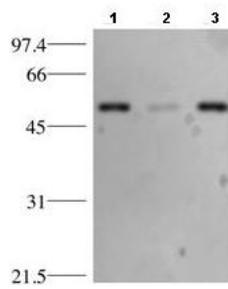
GenID - 7157

Images

- 1 Immunofluorescence microscopy of HeLa cells using anti-p53. Rockland's Protein A purified Mab anti-p53 was used at a 1:100 dilution in 10% normal goat serum in PBS and reacted overnight at 4° C. After washes cells were incubated with a 1:500 dilution of AlexaFluor594 Goat-a-Mouse IgG diluted in normal goat serum for 1 h at room temperature. Personnel Communication. Kuldeep Patel, Loyola University.

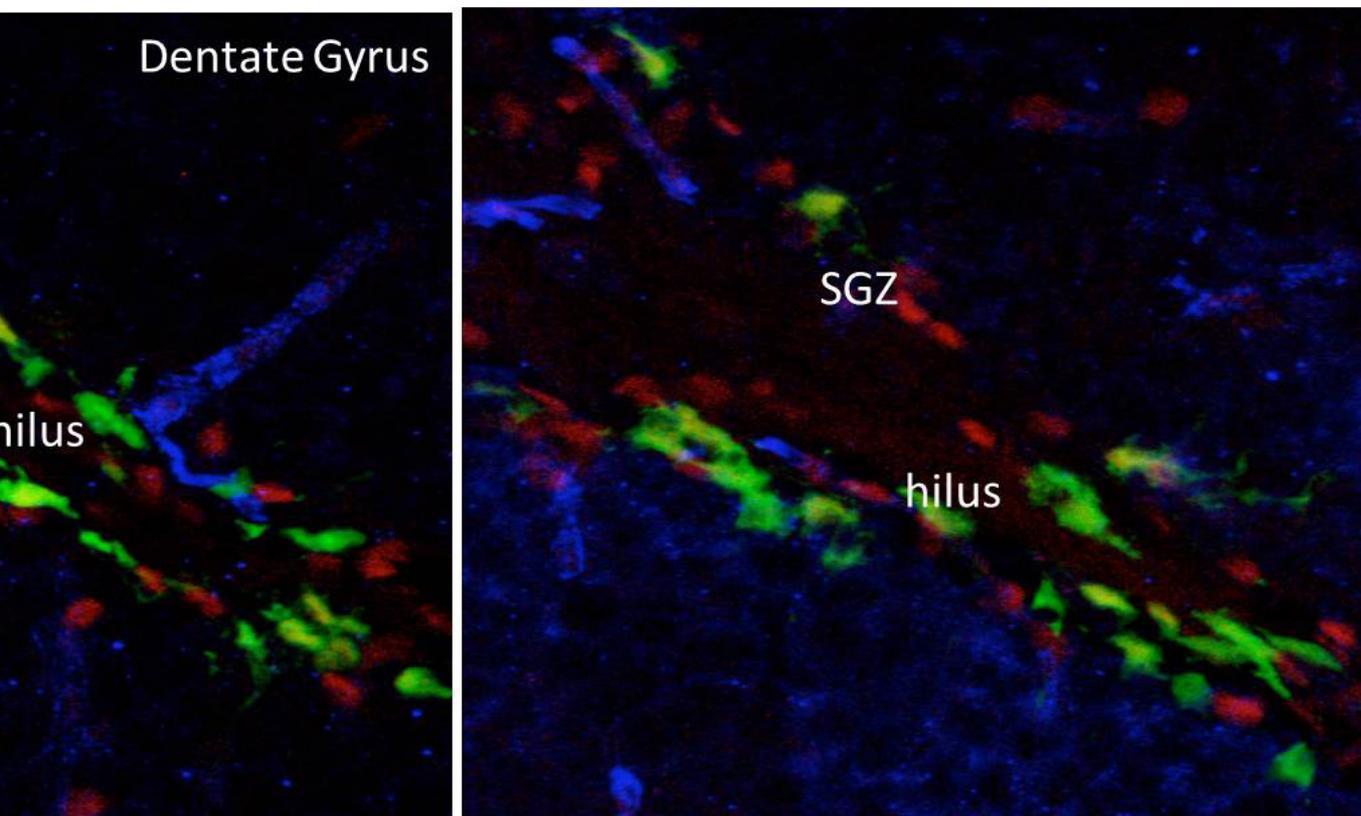


- 2 Western blotting using anti-p53 Antibody. HeLa whole cell lysate (lane 1), cytosol fraction (lane 2), and nuclear extract (lane 3). Load of 15 µg was separated by 10% SDS-PAGE and transferred to nitrocellulose membrane. The membrane was blocked with 3% milk/TBST for 1 h at room temperature followed by incubation with Rockland's Protein A purified Mab anti-p53 antibody overnight at 4° C diluted 1:1,500 in blocking solution. The membrane was washed 3X with TBST and then incubated with a 1:2,000 dilution of HRP Goat-a-Mouse IgG diluted in blocking buffer for 1 h at room temperature. After final washes the proteins reactive on the membrane were detected using ECL. Other detection systems will yield similar results. Personnel Communication. Kuldeep Patel, Loyola University.



3

Immunofluorescence of Mouse anti-p53 antibody. Tissue: human brain. Fixation: free-floating. Antigen retrieval: not required. Primary antibody: anti-human-p53 antibody at 1:500 for 1 h at RT. Co-stained with YFP and Sox2 antibodies. Secondary antibody: Peroxidase mouse secondary antibody at 1:10,000 for 45 min at RT. Localization: p53 is nuclear and cytoplasmic. Staining: p53 as precipitated blue with Cy5, YFP as precipitated green with Cy2, and Sox2 as precipitated red with Cy3. z-stacks from confocal expressed as one composite focal plain.



Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.