Datasheet for ABIN105263

anti-p53 antibody

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Overview

Quantity:	100 µg
Target:	p53 (TP53)
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This p53 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunofluorescence (IF), Immunoprecipitation (IP), Chromatin Immunoprecipitation (ChIP), Multiplex Assay (MA), Fluorescence Microscopy (FM)

Product Details

Purpose:	p53 Antibody
Immunogen:	Immunogen: This protein A purified monoclonal antibody was produced by repeated immunizations with recombinant human p53 protein. Immunogen Type: Recombinant Protein
Clone:	BP53-12
Isotype:	IgG2a kappa
Cross-Reactivity (Details):	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.
Characteristics:	Synonyms: mouse anti-p53 antibody, mouse anti-Tumor Suppressor p53 antibody, Phosphoprotein p53 antibody, TP53 antibody, Transformation related protein 53 antibody,

Product Details

	TRP53 antibody, cellular Tumor antigen p53 antibody
Purification:	Protein A purified
Sterility:	Sterile filtered

Target Details

Target:	p53 (TP53)
Alternative Name:	TP53 (TP53 Products)
Background:	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.
Gene ID:	7157, 23491729
UniProt:	P04637
Pathways:	p53 Signaling, MAPK Signaling, PI3K-Akt Signaling, Apoptosis, AMPK Signaling, Chromatin Binding, ER-Nucleus Signaling, Positive Regulation of Endopeptidase Activity, Hepatitis C, Protein targeting to Nucleus, Autophagy, Warburg Effect

Application Details

Application Notes:	Immunohistochemistry Dilution: 1:50 Application Note: Anti-p53 has been tested by western blot and immunofluorescence and 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

Application Details

	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. ChIP Dilution: 1 µg/µL at 4° o/n Western Blot Dilution: 1:500 - 1:2,000 Immunoprecipitation Dilution: 1:100 ELISA Dilution: 1:2,000 - 1:10,000 IF Microscopy Dilution: 1:100-1:500 Other: User Optimized
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1.0 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.5 M Sodium Chloride, pH 7.2 Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	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.
Expiry Date:	12 months

Publications

Product cited in:	Sikorski, Mehta, Inngjerdingen, Thakor, Kling, Kalina, Nyman, Stensland, Zhou, de Souza, Holden, Stuchly, Templin, Lund-Johansen: "A high-throughput pipeline for validation of antibodies." in: **Nature methods**, Vol. 15, Issue 11, pp. 909-912, (2019) (PubMed).

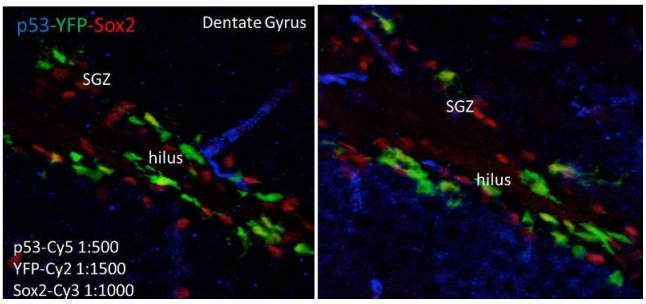
Publications

Lane: "Cancer. p53, guardian of the genome." in: **Nature**, Vol. 358, Issue 6381, pp. 15-6, (1992) (PubMed).

Hollstein, Sidransky, Vogelstein, Harris: "p53 mutations in human cancers." in: **Science (New York, N.Y.)**, Vol. 253, Issue 5015, pp. 49-53, (1991) (PubMed).

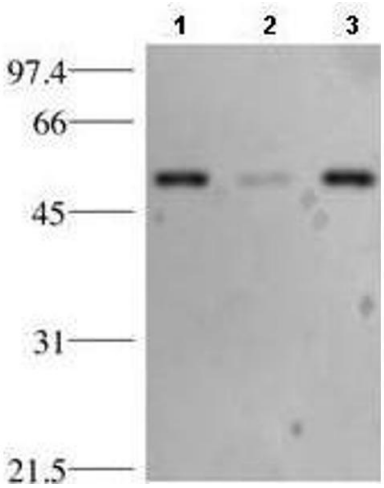
Gurney, Harrison, Fenno: "Monoclonal antibodies against simian virus 40 T antigens: evidence for distinct sublcasses of large T antigen and for similarities among nonviral T antigens." in: **Journal of virology**, Vol. 34, Issue 3, pp. 752-63, (1980) (PubMed).

Images



Immunofluorescence

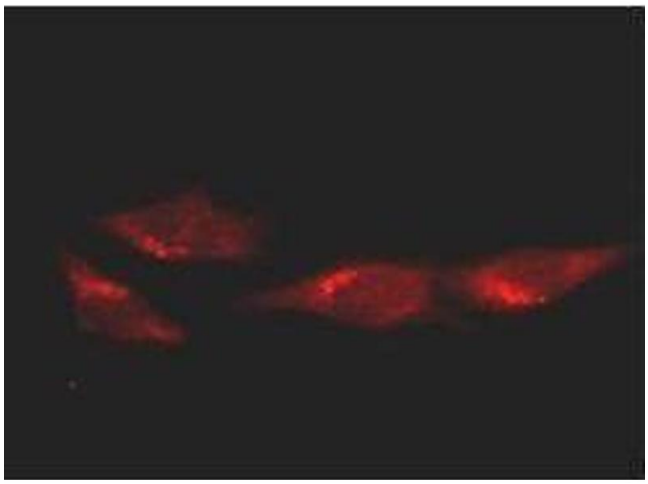
Image 1. Immunohistochemistry of Mouse anti-p53 antibody. Tissue: human brain. Fixation: free-floating. Antigen retrieval: not required. Primary antibody: anti-human-p53 antibody at 1:500 for 1 h at RT. Co-stained with YFP and Sox2 antibodies. Secondary antibody: Peroxidase mouse secondary antibody at 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.



Western Blotting

Image 2. Western blotting using anti-p53. HeLa whole cell lysate (lane 1), cytosol fraction (lane 2) and nuclear extract (lane 3) (15 ?g) were 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 Protein A purified Mab anti-p53 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.



Immunofluorescence

Image 3. Immunofluorescence microscopy of HeLa cells using anti-p53. 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 AlexaFluor?594 Goat-a-Mouse IgG diluted in normal goat serum for 1 h at room temperature. Personnel Communication. Kuldeep Patel, Loyola University.

