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p53; Clone BP53-12

Catalog Number	Format	Volume
A00109-0002	(Ready-To-Use)	2 ml
A00109-0007	(Ready-To-Use)	7 ml
A00109-0025	(Ready-To-Use)	25 ml
A00109-C	(Concentrate)	1 ml

Intended Use

For In-Vitro Diagnostic Use. This antibody is intended for the qualitative visualization of the anatomical elements listed in the Specificity section. It is intended to be used within an Immunohistochemistry (IHC) procedure on formalin-fixed paraffin-embedded (FFPE) human tissue followed by visualization by light microscopy.

Description

Titer/Working Dilution: Ready-to-Use: No further dilution required.
Concentrate: Suggested dilution is 1:50-100

Species: Mouse
Immunogen: Full-length recombinant human p53 was used as immunogen for this antibody.
Clone: BP53-12
Isotype: IgG2a, Kappa
Format: Ready-To-Use antibody has been pre-titered and quality controlled to work on formalin-fixed paraffin-embedded as well as acetone fixed cryostat tissue sections. No further titration is required.

Specificity: This p53 antibody recognizes a 53kDa protein, which is identified as p53 suppressor gene product. The antibody reacts with the mutant as well as the wild form of p53 under denaturing and non-denaturing conditions. The epitope maps within the N-terminus (aa 20-25) of p53 oncoprotein.

Nuclear protein p53 plays an essential role of cell cycle, specifically in the transition from G0 to G1. p53 is a DNA-binding protein containing DNA-binding, oligomerization and transcription activation domains. It is postulated to bind as a tetramer to a p53-binding site and activate expression of downstream genes that inhibit growth and/or invasion, and thus function as a tumor suppressor. Mutations in the evolutionarily conserved condons of the p53 tumor suppressor gene are common in diverse types of human cancer, which includes cancer of colon, lung, esophagus, breast, liver, brain, reticuloendothelial tissues, and hemopoietic tissues. p53 maps to the 17p13.1 region of the human chromosome. Consistent with its role as a tumor suppressor gene in a wide variety of tissue types, p53 performs several different critical functions in regulating cellular growth, replication, and death. p53 positively regulates transcription by binding to specific DNA consensus sequences. These sequences are associated with several known genes including the human ribosomal gene cluster, muscle creatine kinase gene, WAF-1/CIP1/p21, and cyclin G. This sequence-specific transcriptional activation is associated with the induction of growth suppression. p53 also negatively regulates transcription of genes which have TATA box initiated promoters, likely by binding to protein components of the basal transcription machinery. Possibly through the general

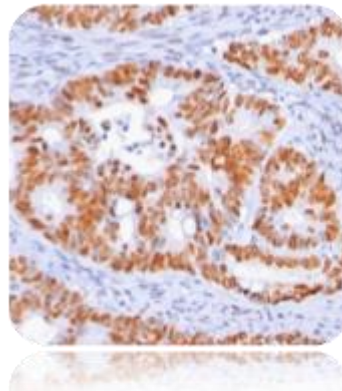
mechanism of transcriptional regulation, p53 affects cell behavior via several specific pathways. Wild-type p53 suppresses cell proliferation by blocking the transition from G1 to S-phase. This may occur through p53 mediated induction of a universal inhibitor of cyclin-dependent kinases, WAF-1 or CIP1. Increased expression of WAF-1/CIP1/p21 serves to inhibit phosphorylation of Rb protein by cdk complexes, resulting in failure to progress from G1 to S-phase.

Species Reactivity: Human. Will not cross-react with mouse or rat.
Cellular Localization: Nuclear.
Microbiological State: Nonsterile

Materials and Reagents Required but not Provided

- Control tissue and reagents
- Xylene, graded alcohols, and deionized/distilled water
- Antibody Diluent.
- IHC detection system. Suggested: ScyTek Cat# ABZ125 "CRF Anti-Polyvalent HRP Polymer" and ScyTek Cat# ACV500 "DAB Chromogen/Substrate Kit (High Contrast)".
- Wash buffer for rinses (ScyTek Cat# TBT500)
- HIER Retrieval Solution
- Hematoxylin counterstain and bluing reagent (ScyTek Cat# HMM500 and BRT500)
- Mounting medium and coverslips

Note: ScyTek Laboratories has a wide range of IHC reagents and ancillaries that can be found at scytex.com.




Procedure

- Tissue Section Pretreatment (Highly Recommended):** Staining of formalin fixed paraffin embedded tissue sections is significantly enhanced by pretreatment with Tis-EDTA HIER Solution (10x) pH 9.0 (ScyTek catalog# TES500) or Citrate Plus (10x) HIER Solution (ScyTek catalog# CPL500)
- Primary Antibody Incubation Time:** We suggest an incubation period of 30 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user.
- Visualization:** For maximum staining intensity we recommend the "UltraTek HRP Anti-Polyvalent Lab Pack" (ScyTek catalog# UHP125, see IFU for instructions) combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).

Storage: 2° C  8° C  ScyTek Laboratories, Inc.
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Storage and Stability

Do not Freeze. Store at 2-8°C. Return to 2-8° immediately after use. Do not use after expiration date printed on label. Verify visually that antibody has not been contaminated before use. Do not use if reagent becomes cloudy or precipitates.

Limitations

Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used. This data sheet's recommendations and procedures were validated using ScyTek IHC reagents and may not be suitable for other detection systems.

Precautions

1. Contains Sodium Azide as a preservative (0.09% w/v), do not ingest. Sodium Azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.
2. Do not pipette by mouth.
3. Avoid contact of reagents and specimens with skin and mucous membranes.
4. Avoid microbial contamination of reagents or increased nonspecific staining may occur.
5. The user must validate any procedures and recommendations that differ from this data sheet.
6. The SDS may be found at scytek.com

References

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Warranty

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Storage: 2° C



8° C



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