p53 [DO-7]

Format	Catalog No.	Pack size	Dilution
Concentrated	G0319 A, B, C	0.1, 0.5, 1.0 mL	1:100 - 200
Prediluted	G0319 AA, BB	6.0, 3.0 mL	Ready to use

ANTIBODY SPECIFICATIONS

- **HOST SPECIES**: Mouse
- **CLONE**: DO-7
- **ISOTYPE**: IgG2b /Kappa
- **CELLULAR LOCALIZATION:** Centrosome, Cytoplasm, Cytoskeleton, Endoplasmic reticulum, Microtubule organizing center, Mitochondrion matrix, Nucleus, PML body
- **IMMUNOGEN:** Recombinant human wild type p53 protein expressed in E. coli.
- **MOLECULAR WEIGHT:** ~53 kDa
- **SPECIES REACTIVITY:** Human, Cow, Monkey
- **POSITIVE CONTROL:** MDA-MB-231 cells. Breast or Colon carcinoma.

INTENDED USE

This antibody is intended **for research use only (RUO)** and is not approved for diagnostic or therapeutic applications. It is optimized for the detection of p53 protein in formalin-fixed, paraffin-embedded (FFPE) human tissues by immunohistochemistry (IHC).

SUMMARY AND APPLICATION

Identifies a 53 kDa protein as a product of the p53 suppressor gene. It interacts with both the wild and mutant forms of p53. Its epitope is located inside p53's N-terminus (aa 37–45). In an ELISA assay, the monoclonal antibody PAb1801 does not prevent DO-7 MAb from binding to p53. A tumour suppressor gene that is expressed in many different tissue types, p53 controls cell division, growth, and death. It attaches itself to the human papillomavirus E6 protein, SV40 T antigen, and MDM2.

SCIENTIFIC BACKGROUND

In colorectal, lung, breast, and urothelial cancers, positive nuclear staining with p53 antibody has been shown to be a poor predictive factor. Additionally, anti-p53 positivity has been used to identify intratubular germ cell neoplasia and distinguish uterine serous carcinoma from endometrioid carcinoma. Many different types of cancerous tumours, such as breast, ovarian, bladder, colon, lung, and melanoma, have p53 mutations.

RECOMMENDED USAGE

- **IHC Protocol Highlights:**
  - Dilution: 1–2 µg/mL
  - Incubation: 30 minutes at room temperature
  - Antigen Retrieval: Heat in 10 mM Tris with 1 mM EDTA (pH 9.0) at 95°C for 45 minutes, followed by cooling

- **Specimen Type**: FFPE sections, preferably ~4 µm

FORMULATION & STORAGE:

- Buffer: 10 mM PBS, 0.05% BSA, 0.05% sodium azide
- Storage:
    - Dilution: 1–2 µg/Ml
    - Without azide: –20 to –80°C
- Shelf Life: 24 months under proper conditions
- Hazard Classification: Non-hazardous; no MSDS required

LIMITATIONS

- Interpretation must be made by a qualified pathologist
- Tissue fixation and handling may affect staining quality
- Negative results do not always indicate absence of antigen—consider panel testing

PRECAUTIONS

- Contains 0.05% sodium azide – avoid ingestion and contact with skin or mucosa
- Wear gloves and avoid contact with eyes or mucosa
- Do not use reagents past expiration or if packaging appears compromised
- Do not pipette by mouth or reuse slides/containers without proper sterilization

TECHNICAL SUPPORT

For technical assistance, please contact Genebio Solution's Technical Support at www.genebiosolution.com