p53 R175H (7B9)

Catalogue No.	Pack Size
8009-1-20	20 µg
8009-1-100	100 µg

Product Description

The tumour suppressor p53 plays a critical role in cellular anticancer defence by inducing cell cycle arrest or apoptosis upon DNA damage or pyrimidine nucleotide starvation. Its upregulation in response to stress signals leads to the transcriptional activation of genes like p21waf1, involved in cell cycle progression, and Bcl-2, involved in apoptosis. Structurally, p53 comprises an N-terminal transactivation, central DNA-binding, oligomerization, and C-terminal regulatory domains. Phosphorylation, particularly at Ser15, is pivotal for p53 activation and stability.

This antibody recognizes one of the most common mutations on the human p53 tumour suppressor protein at residue 175 (Arginine to Histidine; R175H). The antibody also recognizes the mouse equivalent (R172H).

Located in the DNA binding domain, this hotspot mutation is crucial for structural stability as it sits at the zinc-binding site near the DNA binding interface.

The mutation has been implicated in several different cancers including but not limited to cancer of the breast, pancreatic, bone, ovarian, lung, colorectal and prostate.

References: *Hwang et. al., Cell Reports, vol. 22 (2018): 299-312.*
Chiang et. al., Cancers (Basel), Aug 13;13(16):4088.

Product Characteristics

Characteristic	Information
Host species	Mouse
Type	Monoclonal
Isotype	IgG1-k
Clone name	7B9
Immunogen	His-tagged, thioredoxin protein fusion containing three copies of the human mutant p53 sequence containing the R175H mutation (QHMTEVVRHCPHHERCSD).
Species specificity	Human, Mouse
Target Mw (kDa)	53

Supplied at 1mg/mL in 1x PBS with 0.01% sodium azide. Suitable for short term (2 – 3 months) storage at 4°C. Aliquot for long storage at -20°C. Avoid multiple freeze-thawing.

Product Application

p53 R175H (7B9) has been tested to work for the following applications:

- Western Blotting (WB)
- Immunofluorescence (IF)
- Immunoprecipitation (IP)
- Immunohistochemistry (IHC)

Not tested for other applications.

Our recommended starting dilutions are:
1 µg/mL for WB. For IF, IP and IHC, the user will need to determine the optimal dilution.

Technical support

If you are experiencing difficulties with using the reagent, please contact our team with relevant information at **infoab@abasiabiolabs.com**