

**Product Specification Sheet**  
**Monoclonal anti-p53 antibodies**

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|---------------------|--|---------------------|
| <b>Cat. P5311-M</b> | Mouse Monoclonal Anti-Human p53 IgG          | <b>SIZE:</b> 100 ug |
| <b>Cat. P5311-C</b> | Human recombinant p53 protein control for WB | <b>SIZE:</b> 100 ul |

**p53**, the most frequent target of genetic alterations in human cancer, is one of the most widely studied tumor suppressor gene. The most important activities of p53 are its cellular growth arrest and induction of programmed cell death (apoptosis). Human p53 is a single polypeptide chain of 393 AA. It has three well-defined functional domains: An N-terminal acidic transactivation domain (TAD), a central DNA-binding domain (DBD), and a C-terminal homo-oligomerization domain (OD). All three domains are important for interaction with target genes. A great majority of tumor-associated missense mutations occur within the DBD and the mutant protein fails to regulate p53 target genes.

Posttranslational modifications of p53 (**phosphorylation and acetylation**) have been implicated in its physiological role. p53 has at least 4 phosphorylation sites at the N-terminus with Ser15 as an important site in response to DNA damage and a target of the ATM and DNA PK proteins. There are three potential sites within the C-terminus of p53 that may affect its DNA-binding ability. p53 also serve as a substrate for various histone acetylases to enhance its transcriptional activity.

**Source of Antigen and Antibodies**

|                        |  |
|------------------------|--|
| <b>Antigen</b>         | Recombinant human wild type p53 protein  |
| <b>Ab Host/type</b>    | Mouse clone (IgG1) designated P5311-M reacting specifically with p53, was expanded as ascites and antibody purified over phosphopeptide affinity column. |
| <b>2-Ab</b>            | <b>Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)</b>  |
| <b>-ve control IgG</b> | Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control   |

Human p53 protein (protein accession #NP\_00537) - was expressed in *E. coli* and purified (>95%). For Western blot +ve control (**Cat # P5311-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **P5311-C** for good visibility with antibody Cat # **P5311-M**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **P5311-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

**Form & Storage of Antibodies/Peptide Control**

**Aff pure IgG**

100 ug/100 ul solution lyophilized powder contains 0.1% BSA and 0.05% azide **Reconstitute powder** in 100 ul PBS

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Recommended Usage**

**Western Blotting** ~ 1-2 ug/ml or less for affinity pure using Chemiluminescence technique). **Do not use casein for blocking or in any buffers.**

**ELISA** (1:10K-1:100K; using 50-100 ng of control peptide/well).

**Specificity & Cross-reactivity**

P5311-M antibody recognizes human p53. The epitope of this antibody has been localized to the N-terminus (20-30 aa region). No crossreactivity is seen with p63 or p73. Antibody crossreactivity in various species is not established. Human recombinant purified protein #P5311-C can be used as positive control.

**General References:**

Yang A et al (1998) *Mol Cell* 2, 305-316; Kaghad, M et al (1997) *Cell* 90, 809-819.

\*This product is for in vitro research use only.

**Related material available from ADI**

Anti-p53, p63, p73; Survivin, Klotho, Aib1

**Western Blot recycling kit** (Use the same blot to probe with multiple antibodies UCP1 and UCP2, UCP3, etc.) **recycle blot at room temp in 5-10 min**; No mercaptoethanol or heating required).

P5311-M-C

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