ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Recombinant Human p53 Protein

Cat. P5316-R-20 Human recombinant (baculovirus) purified GST-p53 fusion protein **SIZE**: 10 ug

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 it transcriptional activity.

Source of Antigen and Antibodies

Human p53 protein (protein accession #NM_000546) was expressed in baculovirus as GST fusion protein (GST-p53) and purified (>95%, mol wt ~80 kda). Activity: Active in DNA binding assays.

Human p53 protein is supplied in 50 mM Tris, pH 8.0, 50 mM NaCl, 0.25M DT, 0.1 mM EDTA, 0.1 mM PMSF, 10 mM glutathione, and 25% glycerol (lot sp concn provided on the vial ~100 ug/ml). Store at -20oC or below. Do not freeze, thaw, or heat repeatedly.

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

Refolded and purified protein is an excellent substrate for kinase assays;

Highly specific binding to wild-type p53 DNA binding site, this protein is an excellent reagent for development of DNA based binding assay.

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).

P5316-R-10 100831A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com
☎ (800) 786-5777; (210) 561-9515; **Fax**: (210) 561-9544; **Web Site**: www.4adi.com