

## p53 Protein

Recombinant protein expressed in *E. coli* cells

**Catalog # P05-30G**

Lot # V045-3

### Product Description

Recombinant full-length human p53 was expressed in *E. coli* cells using an N-terminal GST tag. The gene accession number is [NM\\_000546](#).

### Gene Aliases

TP53; LFS1, TRP53

### Formulation

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.

### Storage and Stability

Store product at  $-70^{\circ}\text{C}$ . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

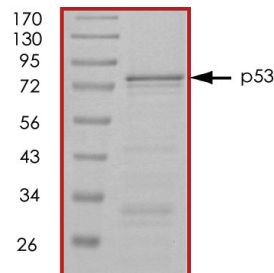
### Scientific Background

p53 is a key regulator of cell growth and acts as a tumor suppressor gene. Wild-type p53 gene can suppress transformation of rat embryo fibroblasts in cell culture by other oncogenes such as the adenovirus E1A and Ras (1). DNA tumor viruses such as SV40 large T antigen and the adenovirus E1A plus E1B-55Kd proteins bind to p53 and inactivate its tumor suppressor activities leading to cellular transformation. Mutational inactivation of the p53 gene is detected in more than 50% of human cancers. Mutation of p53 renders cancer cells more resistant to current cancer therapies due to lack of p53-mediated apoptosis (2).

### References

- Levine, A. J. et al: Tumor suppressor genes: the p53 and retinoblastoma sensitivity genes and gene products. *Biochim Biophys Acta*. 1990 Jun 1;1032(1):119-36.
- Sun, Y. p53 and its downstream proteins as molecular targets of cancer. *Mol Carcinog*. 2006 Jun;45(6):409-15.

### Purity



The purity was determined to be **>85%** by densitometry. Approx. MW **79kDa**.

### Upstream Active Kinases

AKT1, Active	Cat # A16-10G
AKT2, Active	Cat # A17-10G
AKT3, Active	Cat # A18-10G
CHK1, Active	Cat # C47-10G
CHK2, Active	Cat # C48-10G

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Purity	>85%
Concentration	0.2 $\mu\text{g}/\mu\text{l}$
Stability	1yr At $-70^{\circ}\text{C}$ from date of shipment
Storage & Shipping	Store product at $-70^{\circ}\text{C}$ . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped on dry ice.

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