PRIMER DESIGN FOR Trp53 GENE

1. Gene Name:

   Trp53 transformation related protein 53 [*Mus musculus* (house mouse)]

2. Function of the Gene :

   This gene encodes tumor protein p53, which responds to diverse cellular stresses to regulate target genes that induce cell cycle arrest, apoptosis, senescence, DNA repair, or changes in metabolism. p53 protein is expressed at low level in normal cells and at a high level in a variety of transformed cell lines, where it's believed to contribute to transformation and malignancy. p53 is a DNA-binding protein containing transcription activation, DNA-binding, and oligomerization domains. It is postulated to bind to a p53-binding site and activate expression of downstream genes that inhibit growth and/or invasion, and thus function as a tumor suppressor. Mice deficient for this gene are developmentally normal but are susceptible to spontaneous tumors. Evidence to date shows that this gene contains one promoter, in contrast to alternative promoters of the human gene, and transcribes a few of splice variants which encode different isoforms, although the biological validity or the full-length nature of some variants has not been determined.

3. NCBI accession number: >NC_000077.7

4. Forward Primer: GGTGATGGTGAAAGGGAGGA

5. Reverse primer: GTAGACTGGCCCTTCTTGGT

6. Features of primers:

	Length	Start	Tm	GC%
Forward primer	20	10803	59.01	55.00
Reverse primer	20	11032	59.02	55.00

7. Amplicon length and sequence: 230

GGTGATGGTGAAAGGGAGGATAAACTGATTCTCAGAAGTATTCCAGTGTGTTCTGTGA
ATATCCCTACCCATAGTAGAAGCCATCTTAAATTCCTTTTTTTCAGCCTCCAGCCTAGAG
CCTTCCAAGCCTTGATCAAGGAGGAAAGCCCAAACTGCTAGCTCCCATCACTTCATCCC
T CCCCTTTTCTGTCTTCCTATAGCTACCTGAAGACCAAGAAGGGCCAGTCTAC