

Product datasheet for **RG204035**

NOP53 (NM_015710) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NOP53 (NM_015710) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NOP53
Synonyms:	GLTSCR2; PICT-1; PICT1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG204035 representing NM_015710
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGC**

ATGGCGGCAGGAGCAGTGGCGTTGGTGGGAAGCGCAGCTCGAAAAGCGATGCCGATTCTGGTTTCCTGG
 GGCTGCGGCCCACTTCGGTGGACCCAGCGCTGAGGCGGCGGCGGAGGCCCAAGAAATAAGAAGCGGGG
 CTGGCGGCGGCTTGTCTAGGAGCCGCTGGGGCTGGAGTTGACCAAGTTCCTGGAAGACGTGCGGCTACAG
 GAGCGCACGAGCGGTGGCTTGTGTGAGAGGCCCAATGAAAACTCTTCTTCTGAGACTGGCTCCA
 AGGAAAAAGGGCTGACAAAGAAGAGAACCAAGTCCAGAAGAAGTCACTGCTTCTCAAGAAACCCCTTCG
 GGTTGACCTCATCTCGAGAACACATCCAAAGTCCCTGCCCAAGACGTCTCGCCACCAGGTCCCC
 AACGCCAAGAAGCTCAGGCGGAAGGAGCAGCTATGGGAGAAGTGGCCAAGCAGGCGGAGCTGCCCCGGG
 AGGTGCGCAGGGCCAGGCCCGGCTCTCAACCCTTCTGCAACAAGGGCCAAGCCGGGCCCCAGGACAC
 CGTAGAGCGGCCCTTCTACGACCTCTGGCCTCAGACAACCCCTGGACAGGCCGTTGGTTGGCCAGGAT
 GAGTTTTTCTGAGCAGACCAAGAAGAAAGAGTGAAGCGGCCAGCACGCTGCACACCAAGCCGTCCC
 AGGCGCCCGCGTGGAGGTGGCGCTGCCGAGCTTCTACAATCCATCCTTTGAAGACCACAGACCT
 GCTCTCAGCGGCCACGAGGTGGAGTTGCAGCGGCAGAAGGAGGCGGAGAAGCTGGAGCGGCAGCTGGCC
 CTGCCCCGCCACGAGCAGGCCGCCACCCAGGAGTCCACATTCCAGGAGCTGTGCGAGGGGCTGCTGGAGG
 AGTCGGATGGTGAGGGGGAGCCAGGCCAGGGCGAGGGGCCGAGGCTGGGATGCCGAGGTCTGTCCAC
 GCCCGCCCGCTGGCCACCACAGAGAAGAAGACGGAGCAGCAGCGGCGGCGGAGAGGCTGTGCACAGG
 CTGCGGGTACAGCAGGCCGCTTGGCGGCCGCCGCTCCGGCACCAGGAGCTGTTCCGGCTGCGCGGGA
 TCAAGGCCAGGTGGCCTGAGGCTGGCGGAGCTGGCGCGGCGGCGGAGGCGGCGGAGGCGGCGGGA
 GGCTGAGGCTGACAAGCCCCGAAGGCTGGGACGGCTCAAGTACCAGGCACCTGACATCGACGTGCAGCTG
 AGCTCGGAGCTGACAGACTCGCTCAGGACCCTGAAGCCCAGGGCAACATCCTTCGAGACCGGTTCAAGA
 GCTTCCAGAGGAGGAATATGATCGAGCCTCGAGAGAGAGCCAAGTTCAAACGCAAGTACAAGGTGAAGCT
 GGTGGAGAAGCGGGCGTCCGTGAGATCCAGTTG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG204035 representing NM_015710
 Red=Cloning site Green=Tags(s)

MAAGSGVGGRSSKSDADSGFLGLRPTSVDPALRRRRRGRNKKRGWRRLAQEPLGLEVDQFLEDVRLQ
 ERTSGLLSEAPNEKLFFVDTGSKEKGLTKKRTKVQKSLLLKKPLRVDLILENTSKVPAPKDVLAHQVP
 NAKKLRRKEQLWEKLAKQELPREVRRARLLNPSATRAKPGPQDTPVERPFYDLWASDNPLDRPLVGQD
 EFFLEQTKKKGVKRPARLHTKPSQAPAVEVAPAGASYNPSFEDHTLLSAAHEVELQRQKEAEKLERQLA
 LPATEQAATQESTFQELCEGLLEESDGEPEGQEGPEAGDAEVCPTPARLATTEKKTEQRRREKAVHR
 LRVQQAALRAARLRHQELFRLRGIAQVALRLAELARRRRRRQARREAEADKPRRLGRLKYQAPDIDVQL
 SSELTDRLTLKPEGNLRDRFKSFQRRNMIERERAKFKRKYVKLVKRAFREIQL

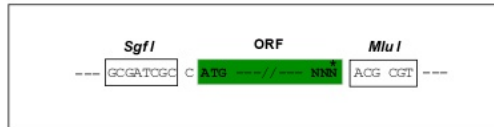
TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:

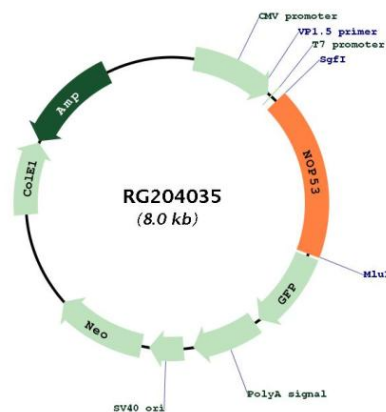


EcoRI BamHI KpnI RBS Kozac Consensus SgfI AscI
 CTATAGGGCGGCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCCGCCGATCGCCGGCGCCAGATCT
 HindIII NheI RsrII MluI NotI XhoI GFP Tag
 CAAGCTTAAGTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC --- ---
 T R T R P L E M E S D - - -
 --- GAA GAA AGA GTT TAA ACGGCCGCCCGGAGCT
 - - E E R V Stop

ACCN:	NM_015710
ORF Size:	1434 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_015710.3 , NP_056525.1
RefSeq Size:	1567 bp
RefSeq ORF:	1437 bp
Locus ID:	29997

UniProt ID:	Q9NZM5
Cytogenetics:	19q13.33
Protein Families:	Druggable Genome
Gene Summary:	<p>Nucleolar protein which is involved in the integration of the 5S RNP into the ribosomal large subunit during ribosome biogenesis (PubMed:24120868). In ribosome biogenesis, may also play a role in rRNA transcription (PubMed:27729611). Also functions as a nucleolar sensor that regulates the activation of p53/TP53 in response to ribosome biogenesis perturbation, DNA damage and other stress conditions (PubMed:21741933, PubMed:24120868, PubMed:27829214). DNA damage or perturbation of ribosome biogenesis disrupt the interaction between NOP53 and RPL11 allowing RPL11 transport to the nucleoplasm where it can inhibit MDM2 and allow p53/TP53 activation (PubMed:24120868, PubMed:27829214). It may also positively regulate the function of p53/TP53 in cell cycle arrest and apoptosis through direct interaction, preventing its MDM2-dependent ubiquitin-mediated proteasomal degradation (PubMed:22522597). Originally identified as a tumor suppressor, it may also play a role in cell proliferation and apoptosis by positively regulating the stability of PTEN, thereby antagonizing the PI3K-AKT/PKB signaling pathway (PubMed:15355975, PubMed:16971513, PubMed:27729611). May also inhibit cell proliferation and increase apoptosis through its interaction with NF2 (PubMed:21167305). May negatively regulate NPM1 by regulating its nucleoplasmic localization, oligomerization and ubiquitin-mediated proteasomal degradation (PubMed:25818168). Thereby, may prevent NPM1 interaction with MYC and negatively regulate transcription mediated by the MYC-NPM1 complex (PubMed:25956029). May also regulate cellular aerobic respiration (PubMed:24556985). In the cellular response to viral infection, may play a role in the attenuation of interferon-beta through the inhibition of DDX58/RIG-1 (PubMed:27824081).[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for RG204035