#### **Quick Start: SNV (genomic)** Reference is hg18 position is 7518131 mutant allele is A

event is SNV

Variant typ 2 NCBI36 (hg18) 7 \$ SNV (single nucleotide variation) \$ 7519131 5 7519131 4 G Α Positive \$ test Start the analysis Select the reference sequence 6 NCBI36 (hg18) GRCh37 (hg19) > hg18 GRCh38 (hg38) NM\_000546.5 (RNA) Select <u>SNV</u> as a variation type (default option) 2 3 Enter the position 7519131 4 Enter the mutant allele Α **Push Start** Input data A HG18 7519131 7519131 SNP TP53 proteins p.R175H NG 017013.2:p.17463G>A LRG\_321t1:c.524G>A LRG\_321t2:c.524G>A LRG\_321t3:c.524G>A p.R175H chr17:g.7519131G>A LRG 321t4:c.524G>A LRG\_321t6:c.128G>A chr17:g.7578406G>A p.R175H LRG\_321t7:c.128G>A LRG 321t8:c.407G>A chr17:g.7675088G>A HCD III - DNA binding LRG\_321p1:p.R175H LRG\_321p3:p.R175H Loop L2 LRG\_321p4:p.R175H LRG\_321p5:p.R43H LRG\_321p6:p.R43H LRG\_321p6:p.R43H LRG\_321p7:p.R43H 3428 LRG\_321p7:p.R43H LRG\_321p8:p.R136H LRG\_321p9:p.R136H LRG\_321p10:p.R136H Comments Missense\_Mutation LRG\_321p11:p.R16H LRG\_321p12:p.R16H Inactive Exonic mutation LRG\_321p12:p.R16H This single nucleotide variant is very frequent This substitution targets 12 TP53 isoforms Damaging

## Quick Start: SNV (cDNA)

Reference is NM\_000546.5 (full Length RNA) performance is SNV mutant

position is 524 mutant allele is A

✗ Reference sequence	🗞 Variant type							
NM_000546.5 (RNA)	SNV (single nucleotide variation)							
<ul> <li>Start position (larger than end position)</li> </ul>	✓ End position							
524	524							
Wild type allele (coding strand)	>⊄ Mutant allele (coding strand)							
G	A (4)							
➡ Strand polarity (leave positive if you have no information)	Sample ID (optional)							
Positive								
Start the analysis								
<ul> <li>Select the reference sequence</li> <li>NCBI36 (hg18) GRCh37 (hg19) GRCh38 (hg38) ML_000546.5 (RNA)</li> <li>Select SNV as a variation type (default option)</li> <li>Select SNV as a variation type (default option)</li> <li>Enter the position → 524</li> <li>Enter the mutant allele → A</li> <li>Push Start</li> </ul>								
Reference         Start         End           NM_000546.5         524         524	Wild type Mutant Type G A SNP							
Nomenclature       Full descript         Mutation in HCVS format NG 0170132:g 17463G>A       Affected trait LRG 321142 LRG	Iton according to LRG     TP53 proteins       1524G>A     p.R175H       1524G>A     p.R175H       128G>A     p.R175H       128G>A     p.R175H       128G>A     p.R175H       128G>A     p.R175H       128G>A     p.R175H       p.R175H     p.R175H       p.R175H     P.ON Binding       p.R136H     P.Comments       p.R136H     P.Comments       p.R136H     P.Comments       p.R16H     P.Comments       P.Column     Damaging							

# Quick Start: deletion (genomic)Reference is hg19position is 7578223 to 7578222

event is Del of 2 nucleotides

Nomenclature of the TP53 gene goes backward

✗ Reference sequence	🗞 Variant	type	
GRCh37 (hg19)	<b>♦</b> Deletion	n 🕗	÷
<ul> <li>Start position (larger than end position)</li> </ul>	✓ End por	sition	
7578223	757822	2 4	
Wild type allele (coding strand)	≫ Mutani	t allele (coding strand)	
GA (5	e.g., ATC	GC	
➡ Strand polarity (leave positive if you have no information)	on) 🗈 Sample	ID (optional)	
Positive	<b>♦</b> Sample	ID	
6 Start the analysis		//	
Selection	t the reference se	quence	
✓ GRCH GRCH NM_0	36 (hg18) h37 (hg19) h38 (hg38) h00546.5 (RNA)	hg19	
Select	Deletion as a var	iation type	
Enter t	he <u>start</u> position o	of the deletion	→ 7578223
Enter t	he <u>end</u> position o	f the deletion	→ 7578222
<b>5</b> Deleted	I nucleotides are a	automatically di	splayed
		Input data	
	Reference Start HG18 7519131	End Wild type 7519131 G	Mutant Type A SNP
	Nomenclature	Full description according to LRG	TP53 proteins
	Mutation in HGVS format Nc_0170132;g:17463G>A NCB136 (ng18) chr17;g:7519131G>A GRCh37 (hg19) chr17;g:7578406G>A GRCh38 (hg38)	Affected transcripts LRG, 32111:c.524G>A LRG, 32112:c.524G>A LRG, 32113:c.524G>A LRG, 32114:c.524G>A LRG, 32114:c.524G>A LRG, 32116:c.128G>A LRG, 32116:c.128G>A LRG, 32116:c.128G>A LRG, 32116:c.128G>A	TP53 alpha <b>p.R175H</b> TP53 beta <b>p.R175H</b> TP53 gamma <b>p.R175H</b> TP53 domain
	Chr1/g./6/5088G>A  Description  Records in database 3428	Affected proteins LRG_321p1:p.R175H LRG_321p3:p.R175H LRG_321p4:p.R175H LRG_321p5:p.R43H LRG_321p5:p.R43H LRG_321p7:p.R43H LRG_321A7:p.R43H	HCDTII - DNA binding Structural motif Loop L2 Post-translational modifications
	Classification Missense Mutation Comment Exonic mutation Frequency This single nucleotide variant is very frequent	LRG_321p9%p.R136H LRG_321p10;p.R136H LRG_321p11;p.R136H LRG_321p11;p.R16H LRG_321p12;p.R16H LRG_321p12;p.R16H	Comments Activity Inactive Isoforms This substitution targets 12 TP53 isoforms Prediction Damaging

## Quick Start: deletion (cDNA)

Reference is NM\_000546.5 (full Length RNA) position is **529** to **546** event is Del of 18 nucleotides

✗ Reference sequence	🗞 Variant type
GRCh37 (hg19) 🛟	Deletion (2) +
<ul> <li>Start position (larger than end position)</li> </ul>	✓ End position
7578223	7578222
<ul> <li>Wild type allele (coding strand)</li> </ul>	≫ Mutant allele (coding strand)
GA (5)	e.g., ATGC
Strand polarity (leave positive if you have no information)	Sample ID (optional)
Positive *	Sample ID
6 Start the analysis	
<b>Select the refere</b>	nce sequence
NCBI36 (hg18) GRCh37 (hg19) GRCh38 (hg38) ✓ NM_000546.5 (RNA)	→ NM_000546.5
<b>Or Select</b> <u>Deletion</u> as	s a variation type
<b>O Enter the <u>start</u> p</b>	osition -> 529
Enter the end percent of the	osition -> 546
<b>O</b> Deleted nucleotide	es are automatically displayed
6 Push Start →	Input data Sample ID: test
Reference HG18	Start End Wild type Mutant Type 7519131 G A SNP
Nomenclature	Full description according to LRG TP53 proteins
Midationi HeVS format NG.017013.2g.17463G>A NCB136 (hg18)	Antecaci transcripts         TP53 april           LRG_32111.524GAA         p.R175H           LRG_32112.524GAA         TP53 beta
chr17;g.7519131G>A GRCh37(hg19) chr17;g.75(hg19)	LRG_32114::524GA p.R175H LRG_32114::524GA TPS3 gamma IBG_32114::524GA TPS3 gamma
CIT 178, 7790057A GRCh38 (hg38) cht17x,7675088G>A	LRG_32107::128GA TP53 domain LRG_32118::407G>A HCDIII-DNA binding
	Affected proteins LRG 321p1:p.R175H LRG 321p3:R175H LCoop L2
Description Records in database	LRG_321p4:p.R175H Post-translational modifications LRG_321p5:p.R43H - LRG_321p6:p.R43H -
3428 Classification	LRG_321p7;p.R43H LRG_321p8;p.R136H LRG_3210;p.R136H Comments
Missense_Mutation Comment Evolution	LRG_321p10;pR136H LRG_321p11;pR16H LRG_321p11;pR16H LRG_321p12;pR16H LRG_421p12;pR16H
Frequency This single nucleotide variant is v	Very frequent LRG_321p12:p.R16H Isoforms This substitution targets 12 TP53 isoforms
	Prediction Damaging

# Quick Start: Insertion/deletion (genomic)Reference is hg19position is 7579580 to 7579577

event is del4ins GTCGT

## Nomenclature of the TP53 gene goes backward

Reference sequence	٩	Variant type			
GRCh37 (hg19)	÷	Indel (insertion/deletion)	2		ŧ
<ul> <li>Start position (larger than end position)</li> </ul>		End position			
7579580		7579577	4		
Wild type allele (coding strand)	2	⊄ Mutant allele (coding strand	1)		
CGTC		GTCGT	5		
It and polarity (leave positive if you have no information	n)	Sample ID (optional)	ATTEN A		
Positive	÷	Sample ID			
6 Start the analysis			1	and a second	
Selection	t the referenc	e sequence			
✓ GRCh GRCh NM_0	36 (hg18) h37 (hg19) h38 (hg38) h00546.5 (RNA)	→ hg19			
<b>2</b> Select	<u>Indel as a va</u>	riation type			
<b>3</b> Enter	r the <u>start</u> pos	ition of the d	eletion	→ 757958	0
🕘 Ente	r the <u>end</u> posi	ition of the de	eletion	→ 757957	7
G Enter th	ne inserted nu	Icleotides -	→ GTC	GT	
Check carefully the orientation of th	ne inserted sequence	as the nomenclature	of the TP53	gene goes backward	
		Input d	ata	S 8	
Push Start	Reference Start HG19 75795	E End 80 7579577	Wild type CGTC	Mutant Type GTCGT INDEL	
	Nomenclature	Full description according	to LRG	TP53 proteins	
	NG_017013.2:g.16289_16292delinsGTCGT	LRG_321t1:c.107_110delin LRG_321t2:c.107_110delin	sGTCGT sGTCGT	P-33 alpha p.(P36Rfs*7) TP53 beta	
	chr17:g.7520305_7520302delinsGTCGT GRCh37 (hg19)	LRG_321t3:c.10/_110delin LRG_321t4:c.107_110delin LRG_321t5:c-1047_10delin	sGTCGT sGTCGT JelinsGTCGT	p.(P36Rfs*7) TP53 gamma	
	chr17:g.7579580_75795877delinsGTCGT GRCh38 (hg38) chr17:g.7676362 7676259delinsGTCGT	LRG_321t6:C-1047_10440 LRG_321t7:C-1047_10440 LRG_321t8:C-118delinsG	lelinsGTCGT IelinsGTCGT TCGT	p.(P36Rfs <sup>-7</sup> ) TP53 domain Transactivation TAD1	
		Affected proteins LRG_321p1:p.(P36Rfs*7) LRG_321p3:p.(P36Rfs*7)			
	Description Records in database	LRG_321p4:p.(P36Rfs*7) LRG_321p5:p.(=) LRG_321p6:p.(=)			
	3 Classification	LRG_321p7:p.(=) LRG_321p8:p.(=) LRG_321p9:p.(=)		Comments	
	Frameshift_Indel Comment Exonic mutation	LRG_321p10:p.(=) LRG_321p11:p.(=) LRG_321p12:p.(=)		Activity The consequences of this complex indel ar	e
	Frequency This frameshift variant is not frequent	LRG_321p12:p.(=)		unknown; the activity of truncated TP53 is assumed to be nil	3
				No prediction for frameshift mutation	

# Quick Start: Duplication (genomic)Reference is hg19position is 7579364 to 7579358event is dupGTTTCCG

Nomenclature of the TP53 gene goes backward

≁ Reference sequence		👒 Variant type			
GRCh37 (hg19)	\$	Duplication	2		\$
<ul> <li>Start position (larger than end position</li> </ul>		End position			
7579364	3	7579358	4		
Wild type allele (coding strand)		≫ Mutant allele (coding strand)			
бтттссб		e.g., ATGC			
😅 Strand polarity (leave positive if you ha	ve no information)	Sample ID (optional)			
Positive	÷	Sample ID			
5 Start th	e analysis				
	Select the referen	nce sequence			
	NCBI36 (hg18) ✓ GRCh37 (hg19) GRCh38 (hg38) NM_000546.5 (RNA)	→ hg19			
2	Select Duplication	<u>n</u> as a variation	type		
<u>3</u> E	icaton	→ 757	9364		
<b>4</b>	Enter the <u>end</u> positi	on of the dupli	cation	→ 757	9358
<b>Ouplicated n</b>	ucleotides are aut	omatically disp	layed	→ GTTT	CCG

Check carefully the orientation of the duplicated sequence as the nomenclature of the TP53 gene goes backward

6	Push Start	$\rightarrow$	Input data					
			Reference HG19	Start <b>7579364</b>	End 7579358	Wild type GTTTCCG	Mutant GTTTCCG	Type DUP
			Nomenclature		Full description accordi	ng to LRG	TP53 proteins	
			Mutation in HGVS format NG_017013.2;g.16505_165 NGB136 (hg18) chr17;g.7520083 GRC:h37 (hg19) chr17;g.7579364_7579358 GRC:h38 (hg38) chr17;g.7576046_7676040 Description Records in database 5 Classification Frame_Shift_Ins Comment Exonic mutation Frequency This frameshift variant is free	studup dupGTTTCCG dupGTTTCCG dupGTTTCCG	Affected transcripts LRG.32112-323.3294u LRG.32112-323.3294u LRG.32113-323.3294u LRG.32113-323.3294u LRG.32113-323.3294u LRG.32113-2323.3294u LRG.321152-831.4254 LRG.321152-831.4254 LRG.321152-831.4254 LRG.321152-831.4254 LRG.321152-831.4254 LRG.321152-801.1117Fs4 LRG.3210520,11117Fs4 LRG.3210520,11117Fs4 LRG.3210520,11117Fs4 LRG.3210520,11117Fs4 LRG.3210520,11117Fs4 LRG.3210520,11117Fs4 LRG.3210520,11117Fs4 LRG.3210520,11117Fs4 LRG.3210520,11117Fs4 LRG.3210127Fs4 LRG.3210127Fs4 LRG.32101127Fs4 LRG.321027Fs4 LRG.32107Fs4 LRG.32107Fs4 LRG.3	() () () () () () () () () () () () () (	TP53 alpha p.(L11Ffs*40) TP53 bata p.(L11Ffs*40) TP53 gamma p.(L11Ffs*40) TP53 domain DNA binding Structural motif - Post-translational modif - Comments Activity The activity of truncated Isoforms - Prediction No prediction for framesi	ications p53 is assumed to be nil nift mutation

### **Quick Start: Duplication (cDNA)**

Reference is NM\_000546.5 (full Length RNA) position is **473** to **478** event is dupGTTTCCG



### Quick Start: Insertion/deletion (cDNA)

# Reference is NM\_000546.5 (full Length RNA) position is **741** to **742** event is delCCinsTT





	Duch Start	_	Input data					
U	Push Start	-	Reference HG19	Start <b>7579585</b>	End <b>7579584</b>	Wild type CT	Mutant G	Type INS
			Nomenclature		Full description accordin	g to LRG	TP53 proteins	
			Mutation in HGVS format NG_017013.2:g.16284_1628 NG 8136 (hg18) chr17;g.7520310_7520309ir GRCh37 (hg19) chr17;g.7579585_7579584ir GRCh38 (hg38) chr17:g.7676267_7676266ir Description Records in database 4 Classification Frame_Shift_Ins Comment Exonic mutation Frequency This frameshift variant is not	I5insG nsG nsG frequent	Affected transcripts LRG_32111:::102_103insG LRG_32112::102_103insG LRG_32113::102_103insG LRG_32114::102_103insG LRG_32115::-10521051 LRG_32115::-10521051 LRG_32115::-10521051 LRG_32117::-10521051 LRG_32117::-10521051 LRG_321191::-1(135Vfs*8) LRG_321p3::p(135Vfs*8) LRG_321p3::p(135Vfs*8) LRG_321p3::p(-1) LRG_321p5::p(-1) LRG_321p5::p(-1) LRG_321p3::p(-1) LRG_321:p1::p(-1) LRG_321::p(-1) LRG_321::p(	5 5 5 LinsG LinsG	TP53 alpha p.(L35Vfs*8) TP53 beta p.(L35Vfs*8) TP53 gamma p.(L35Vfs*8) TP53 domain Transactivation TAD1 Structural motif - Post-translational modific - Comments Activity The activity of truncated p Isoforms - Prediction No prediction for frameshi	ations 53 is assumed to be nil ft mutation

### **Quick Start: Insertion (cDNA)**

Reference is NM\_000546.5 (full Length RNA) position is **328** to **329** event is Ins of 5 nucleotides (AAACC)

