

Patient		Physician	
Name : xxxxxxxxxxxx		Name : xx xxxxxxxxxxxx	
Gender : M	Date of Birth : DD/MM/YYYY	Institute : xxxxxxxxxxxx	

Diagnosis : Colorectal Cancer			
Sample Type : FFPE	Sample Collection Date : DD/MM/YYYY	Sample ID : PB_CG_SC_XXXX-XX_X	
Test : PositiveSelect Immunotherapy	Technology : Illumina NGS	Coverage : 1000x	Report Date : DD/MM/YYYY

Microsatellite status	MS-Stable (6.04%)	
Tumor Mutation Burden	TMB-Low (3.80/Mbp)	
MLH1	No alterations detected	
MSH2	No alterations detected	
<b>MSH6</b>	<b>c.1290delG [subclonal]</b>	<b>Positive</b>
PMS2	No alterations detected	

Note:  
 MS-Stable: ≤ 20% unstable sites,  
 MS-Unstable: >20% unstable sites  
 TMB-Low: <8 mutations/MB,  
 TMB-Intermediate: 9-19 mutations/MB, TMB-High: ≥ 20 mutations/MB.

Note: We identified a MSH6 deletion (c.1290delG) [subclonal] which causes a frameshift that leads to a change in the amino acid Lysine to Asparagine which ultimately results in a premature stop codon. The mutation is expected to affect the DNA mismatch repair functions of the MSH6 gene. This variant has been classified pathogenic as per both American College of Medical Genetics and Genomics (ACMG) and ClinVar. ClinVar associates it with Hereditary cancer-predisposing syndrome (ClinVar Accession: RCV000132371.2).

Note: This report is intended only for qualified medical professionals.

**Positive Biosciences Ltd.**

**Registered Office:** 645, Anna Salai, Thousand Lights, Chennai - 600 006. Tel.: 044-28290187

**Corporate Office:** 1st Floor, Kohinoor City Mall, Gate No. 1, Opp. Don Bosco School, Premier Road, Kirol Road, Kurla (West), Mumbai - 400 070.

Toll Free: 1800 1235 835 Website: www.positivebioscience.com Email: info@positivebioscience.com CIN: U93000TN1995PLC030290

## References

Campesato, Luis Felipe, et al. "Comprehensive cancer-gene panels can be used to estimate mutational load and predict clinical benefit to PD-1 blockade in clinical practice." *Oncotarget* 6.33 (2015): 34221.

Chalmers, Zachary R., et al. "Analysis of 100,000 human cancer genomes reveals the landscape of tumor mutational burden." *Genome medicine* 9.1 (2017): 34.

Cortes-Ciriano, Isidro, et al. "A molecular portrait of microsatellite instability across multiple cancers." *Nature Communications* 8 (2017):15180.

Eifert, Cheryl, et al. "Clinical application of a cancer genomic profiling assay to guide precision medicine decisions." *Personalized medicine* 14.4 (2017): 309-325.

Frampton, G. M., et al. "Assessment and comparison of tumor mutational burden and microsatellite instability status in >40,000 cancer genomes." *Annals of Oncology* 27.suppl 6 (2016): 520.

Gatalica, Zoran, et al. "High microsatellite instability (MSI-H) colorectal carcinoma: a brief review of predictive biomarkers in the era of personalized medicine." *Familial cancer* 15.3 (2016): 405-412.

---

**Positive Biosciences Ltd.**

**Registered Office:** 645, Anna Salai, Thousand Lights, Chennai - 600 006. Tel.: 044-28290187

**Corporate Office:** 1st Floor, Kohinoor City Mall, Gate No. 1, Opp. Don Bosco School, Premier Road, Kiroli Road, Kurla (West), Mumbai - 400 070.  
Toll Free: 1800 1235 835 Website: [www.positivebioscience.com](http://www.positivebioscience.com) Email: [info@positivebioscience.com](mailto:info@positivebioscience.com) CIN: U93000TN1995PLC030290

PositiveSelect Immunotherapy

PositiveSelect Immunotherapy is a comprehensive test to identify Tumor Mutation Burden (TMB), Microsatellite Instability (MSI) and presence of alterations in the DNA mismatch repair genes using NGS technology. This complete genomics test begins with sample collection, through DNA isolation followed by sequencing of 2.5 Mb target regions of exome. MSI is determined by assessing indel characteristics at 114 homopolymer repeat loci in or around the targeted gene regions. TMB is determined by extrapolating the number of somatic mutations in sequenced genes to the whole genome and represented as number of mutations per Mb.

Analyzed by:

Verified by:

Scientific Officer

Sr. Scientific Officer

*Disclaimer: The information in this report is meant for medical professionals only. This report should not be construed as personal medical advice and is not intended to replace medical advice ordered by physicians. This document should not be used to establish any standard of care. Clinicians should use their own clinical judgment and not base clinical decisions solely on this document. Positive Bioscience will not be liable for any direct, indirect, consequential, special, exemplary, or other damages. Using this report means the person undertaking this test consents and fully agrees to all terms listed at <http://www.positivebioscience.com/terms.aspx>*

---

**Positive Biosciences Ltd.**

**Registered Office:** 645, Anna Salai, Thousand Lights, Chennai - 600 006. Tel.: 044-28290187

**Corporate Office:** 1st Floor, Kohinoor City Mall, Gate No. 1, Opp. Don Bosco School, Premier Road, Kiro Road, Kurla (West), Mumbai - 400 070.  
Toll Free: 1800 1235 835 Website: [www.positivebioscience.com](http://www.positivebioscience.com) Email: [info@positivebioscience.com](mailto:info@positivebioscience.com) CIN: U93000TN1995PLC030290