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REPORT

Laboratory Director : George Nasioulas PhD.

Sample Information

Name:	test	Req. Physician:	test test
ID/Medical ID:	test 4-8	Report No:	22010729GR
Date Of Birth:	02/08/2022	Date Received:	14/09/2022
Patient Location:		Date Of Report:	14/09/2022

Sample Details

Type of sample #1:	PLASMA	Code of sample #1:	XXXXX
Barcode of sample #1:	22010729GR-1		

KRAS 2,3,4 and NRAS 2,3,4 Liquid biopsy

The *KRAS* and *NRAS* genes are members of the *RAS* genes family. Somatic mutations in the both genes have been detected in various cancer types. Free circulating DNA was isolated from the sample under investigation (QIAamp Circulating Nucleic Acid Kit, Qiagen). A targeted sequencing assay (Oncomine Lung cell free total nucleic acid assay, Thermo Fisher Scientific) was used for mutation detection in exons 2, 3 and 4 of the *KRAS* and *NRAS* genes. Sequencing was carried out using the Next Generation Sequencing platform Ion Gene Studio S5 Prime System (Thermo Fisher Scientific).

Results

Material suitable for analysis.

The assayed sample carries the mutation c.35G>T (p.G12V) in exon 2 of the *KRAS* oncogene. No mutations were found in exons 3 & 4 of the *KRAS* oncogene and in exons 2, 3 & 4 of the *NRAS* oncogene.

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References:

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A company certified with ELOT EN ISO 9001:2015 (Cert. No 041150049) and accredited under the terms of ELOT EN ISO 15189:2012 (Cert. No. 822)
1. Francis G, Stein S. Circulating Cell-Free Tumour DNA in the Management of Cancer. Int J Mol Sci. 2015

Jun 19;16(6):14122-42.

2. Crowley E, Di Nicolantonio F, Loupakis F, Bardelli A Liquid biopsy: monitoring cancer-genetics in the blood. Nat Rev Clin Oncol. 2013 Aug;10(8):472-84.

3. Frank McCormick. Targeting KRAS Directly. Annual Review of Cancer Biology. 2018 2(1), 81-90

4. Dhirendra K. Simanshu, Dwight V. Nissley and Frank McCormick. RAS Proteins and Their Regulators in Human Disease. Cell 170, June 29, 2017.

5. <https://cancer.sanger.ac.uk/>

6. <https://www.mycancergenome.org/>

*****Note** : Each analysis has an internal error probability of 0,5-1%. This is due to rare events and factors involved in the production and analysis of specimens.