



# Test Catalog

Diagnostic. Prognostic. Predictive. Predisposition.



## NRAS Mutation Analysis by PCR

### Alternative Name

NRAS Gene Analysis

### Methodology

Molecular

### Test Description

The NRAS Mutation Analysis Assay is a real-time PCR-based assay designed to detect somatic mutations in exons 2, 3 and 4 of the NRAS gene. A 'Detected' result indicates the presence of any one of the following NRAS mutations: G12D/C/S, G13R/V, K117R, Q61H/L/K/R, A146T and A59D/T. Testing is available separately or in combination with BRAF, HRAS and KRAS in the NGS based RAS/RAF Panel.

### Clinical Significance

NRAS mutations are frequently found in many human cancers, particularly melanoma, acute myeloid leukemia, thyroid cancer and colorectal carcinoma (CRC). NRAS mutations occur most commonly at codon 61 of exon 3. Less commonly, mutations occur at codons 12 and 13 of exon 2, codon 59 of exon 3 and codons 117 and 146 of exon 4. CRC patients with any known NRAS mutation (exons 2, 3, and 4) are associated with resistance to anti-EGFR targeted antibody therapies such as cetuximab or panitumumab. NRAS mutations are present in approximately 20% of melanoma and may predict response to MEK inhibitors.

### Specimen Requirements

- Peripheral blood: 5 mL in EDTA tube.
- Bone marrow: 2 mL in EDTA tube.
- FFPE solid tumor tissue: Paraffin block is preferred. Alternatively, send 1 H&E slide plus 5-10 unstained slides cut at 5 or more microns. Please use positively-charged slides and 10% NBF fixative. Do not use zinc fixatives.

### Storage & Transportation

Use cold pack for transport, making sure cold pack is not in direct contact with specimen

### CPT Code(s)\*

81311

### New York Approved

No

### Level of Service

Global

### Turnaround Time

7 days

\*The CPT codes provided with our test descriptions are based on AMA guidelines and are for informational purposes only. Correct CPT coding is the sole responsibility of the billing party.

Please direct any questions regarding coding to the payor being billed.

NeoGenomics Laboratories is a specialized oncology reference laboratory providing the latest technologies, testing partnership opportunities, and interactive education to the oncology and pathology communities. We offer the complete spectrum of diagnostic services in molecular testing, FISH, cytogenetics, flow cytometry, and immunohistochemistry through our nation-wide network of CAP-accredited, CLIA-certified laboratories.

Committed to research as the means to improve patient care, we provide Pharma Services for pharmaceutical companies, in vitro diagnostic manufacturers, and academic scientist-clinicians. We promote joint publications with our client physicians. NeoGenomics welcomes your inquiries for collaborations. Please contact us for more information.

\*The CPT codes provided with our test descriptions are based on AMA guidelines and are for informational purposes only. Correct CPT coding is the sole responsibility of the billing party.

Please direct any questions regarding coding to the payor being billed.



9490 NeoGenomics Way  
Fort Myers, FL 33912  
Phone: 239.768.0600/ Fax: 239.690.4237  
neogenomics.com

© 2024 NeoGenomics Laboratories, Inc. All Rights Reserved.  
All other trademarks are the property of their respective owners  
Rev. 103124