TEST ID: CAPN

SOLID TUMOR TARGETED CANCER GENE PANEL BY NEXT GENERATION SEQUENCING

USEFUL FOR
- Identifying solid tumors that may respond to targeted therapies by assessing multiple gene targets simultaneously
- Identifying specific mutations within genes known to be associated with response or resistance to specific cancer therapies
- Identifying mutations that may help determine prognosis for patients with solid tumors
- Assisting in establishing a diagnosis (e.g., KIT and PDGFRA alterations for gastrointestinal stromal tumors)

CLINICAL INFORMATION
Targeted cancer therapies are defined as antibody or small molecule drugs that block the growth and spread of cancer by interfering with specific cell molecules involved in tumor growth and progression. Multiple targeted therapies have been approved by the United States Food and Drug Administration (FDA) for treatment of specific cancers. Molecular genetic profiling is often needed to identify targets amenable to targeted therapies and to minimize treatment costs and therapy-associated risks.

Next generation sequencing has recently emerged as an accurate, cost-effective method to identify mutations across numerous genes known to be associated with response or resistance to specific targeted therapies. CAPN / Solid Tumor Targeted Cancer Gene Panel by Next Generation Sequencing is a single assay that uses formalin-fixed paraffin-embedded tissue to assess for common mutations in 50 genes known to be associated with cancer. The results of this test can be useful for assessing prognosis and guiding treatment of individuals with solid tumors. These data can also be used to help determine clinical trial eligibility for patients with mutations in genes not amenable to current FDA-approved targeted therapies.

See Targeted Gene Regions Interrogated by Solid Tumor Targeted Cancer Gene Panel by Next Generation Sequencing in Special Instructions for details regarding the targeted gene regions identified by this test.

INTERPRETATION
An interpretive report will be provided.

MOBILE APPS FROM MAYO MEDICAL LABORATORIES
Lab Catalog for iPad and Lab Reference for iPhone and iPod Touch

Requires iOS 5.1+

REFERENCE VALUES

An interpretive report will be provided.

ANALYTIC TIME
12 days

ADDITIONAL TESTS

Test ID: SLIRV
Reporting Name: Slide Review in MG
Available Separately: No
Always Performed: Yes

10/2015

CONTENT AND VALUES SUBJECT TO CHANGE. SEE THE MAYO MEDICAL LABORATORIES TEST CATALOG FOR CURRENT INFORMATION.
CAUTIONS

- This test cannot differentiate between somatic and germline alterations. Additional testing may be necessary to clarify the significance of results if there is a potential hereditary risk.
- This test is not intended for use for hematological malignancies.
- DNA variants of uncertain significance may be identified.
- A negative (wild-type) result does not rule out the presence of a mutation that may be present but below the limits of detection of this assay (approximately 5%–10%).
- This test does not detect large single or multi-exon deletions or duplications or genomic copy number variants.
- Rare polymorphisms may be present that could lead to false-negative or false-positive results. Test results should be interpreted in the context of clinical findings, tumor sampling and other laboratory data. If results obtained do not match other clinical or laboratory findings, please contact the laboratory for updated interpretation. Misinterpretation of results may occur if the information provided is inaccurate or incomplete.

50 GENE PANEL LIST

<table>
<thead>
<tr>
<th>GENES WITH TARGETED REGIONS EVALUATED</th>
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<tbody>
<tr>
<td>ABL1</td>
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<tr>
<td>AKT1</td>
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<tr>
<td>ALK</td>
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<td>CDH1</td>
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<td>CSF1R</td>
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<td>CTNNB1</td>
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CLINICAL REFERENCE