



Test Catalog

Diagnostic. Prognostic. Predictive. Predisposition.





MGMT Promoter Methylation Analysis

Alternative Name

MGMT Methylation

Methodology

Molecular

Test Description

Bisulfite modification of tumor DNA and real-time PCR are used to quantify CpG methylation within the MGMT gene promoter. Percentage of methylated DNA (compared to total DNA) is reported for positive results.

Clinical Significance

Methylation (or hypermethylation) of the MGMT gene promoter down-regulates or inactivates the normal DNA-repair function of the MGMT enzyme, which can make tumors more susceptible to radiation or alkylating agent-based therapy. Testing is particularly useful in gliomas. About 45% of glioblastomas have MGMT methylation, and these patients show improved survival when treated with radiation and temozolomide over those patients with non-methylated tumors. Methylation has also been associated with improved survival in anaplastic gliomas, regardless of treatment. MGMT methylation has been reported in other tumors including colorectal, lung, and lymphoma, and alkylating agents and/or radiation therapy may be considered in these cases.

Specimen Requirements

- **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. A minimum of 40% tumor is required. If the tumor cannot be enriched to at least 40%, then testing will not be performed.

Storage & Transportation

Use cold pack for transporting block during summer to prevent block from melting. Slides can be packed at room temperature.

CPT Code(s)*

81287

New York Approved

Yes

Level of Service

Global

Turnaround Time

10 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.

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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.

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