

JAX MGMT Promoter Methylation Assay

MGMT Promoter Methylation status is predictor for temozolomide treatment

The NCCN guidelines state MGMT Promoter Methylation status is an essential part of molecular diagnostics for all high-grade gliomas. It is the key mechanism of MGMT gene silencing and predicts a favorable outcome in patients with glioblastoma who are exposed to alkylating agent chemotherapy. MGMT Promoter Methylation testing enables clinicians to make vital decisions for patient care.

PROVEN TECHNOLOGY

The JAX MGMT Promoter Methylation Assay utilizes a quantitative PCR (qPCR) followed by high-resolution melt analysis (HRM) to identify MGMT promoter methylation. Genomic DNA is extracted from FFPE tissues (minimum 30% neoplastic content) and bisulfite treated using the EZ DNA Methylation-Gold Kit (Zymo). The bisulfite-treated DNA is amplified via qPCR followed by a melting analysis on an Applied Biosystems QuantStudio 7. The area under the curve (AUC) is calculated for the HRM derivative plots for both methylated and unmethylated peaks and the ratio of methylated to unmethylated is calculated. Specimen will be interpreted as MGMT Promoter Unmethylated if the methylated/unmethylated ratio falls within the validated unmethylated range. Specimen with ratios above a 15% methylated control will be interpreted as MGMT Promoter Methylated and specimen with ratios between unmethylated and 15% will be interpreted as Indeterminate.

The JAX[®] Advantage



EXPERTISE:

The JAX Advanced Precision Medicine Laboratory aims to maintain a CNS tumor center of excellence through the expertly trained team of scientists and analysts, and via collaborations with JAX Cancer Center researchers and local clinicians.



VALIDATED PERFORMANCE:

During clinical validation, 100% of samples with reportable calibration scores were found to confirm the original characterizations.



SPEED:

Receive results within a clinically actionable time frame to accelerate treatment decisions.

ABOUT JAX APML

The JAX Advanced Precision Medicine Laboratory is a CLIA-certified, CAP-accredited, and NCI-MATCH-designated laboratory delivering precise genomic testing and critical data analysis services to help improve treatment options for patients.



JAX ADVANCED PRECISION
MEDICINE LABORATORY

 1.860.837.2320

 CGL_CS@JAX.ORG

JAX MGMT Promoter Methylation Assay

SUBMISSION CRITERIA

FFPE SLIDES

- Sample packaging: uncoated, unbaked slides in plastic slide containers
- Slide format: 1 H&E slide and 10 adjacent unstained 5 μ M sections
- Area of tumor cell content should be a minimum of 3x3mm or 5,000 cells and be comprised of at least 30% cancer cells.

FFPE BLOCK

- Sample packaging: sealed biohazard bag
- Content area: 3x3mm or 5,000 cells and be comprised of at least 30% cancer cells.

DNA

- Sample concentration: ≥ 10 ng/uL
- Sample quality: <5 (Δ CT)
- Amount of material: ≥ 200 ng

REQUEST A SHIPPING KIT

Request your kit by email at CGL_CS@jax.org or by phone at (860) 837-2320.

SHIP TO:

The Jackson Laboratory
Attn: Advanced Precision Medicine Laboratory
10 Discovery Drive
Farmington, CT 06032

