



Genekor
Committed to Biotechnological Innovation



**SHAPING SCIENCE
IMPROVING LIVES**

Gliogene®

Modern brain tumor diagnostics rely on an integrated approach that combines traditional histopathology with key molecular and genetic markers. As defined in the WHO 2021 (5th edition) Classification of Tumors of the Central Nervous System, these molecular features are now essential elements of accurate tumour classification.

Molecular profiling enhances traditional histologic assessment by adding critical diagnostic and prognostic insights that improve classification accuracy, guide treatment selection, and support informed clinical decision making.

Gliogene® brings together the most clinically relevant biomarkers into a single, streamlined panel designed to support physicians at every step of the decision-making process.

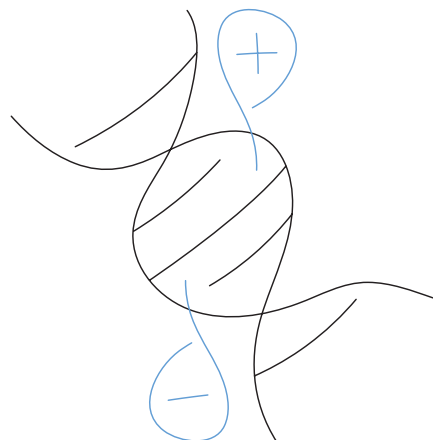
28 gene alterations									
ATRX*	BRAF*	CDKN2A*	CDKN2B*	CIC*	CTNNB1*	EGFR*	ERBB2*	FUBP1*	H3F3A
HIST1H3B	HIST1H3C	IDH1	IDH2	MET	MYC	MYCN	MYD88	NF1	PTCH1
SMARCB1	SMARCA4	SMO	SUFU	TERT	TP53	TSC1	TSC2		
9 fusion transcripts									
ALK	FGFR1	FGFR2	FGFR3	NTRK1	NTRK2	NTRK3	RET	ROS1	
MSI									
MGMT methylation status by Real Time PCR									
1p19q status by FISH									

*CNV (amplification/deletion) analysis is included for these genes

The panel includes essential diagnostic biomarkers for WHO classification, which are essential for the accurate diagnosis of brain tumors, such as **mutations in the IDH1/IDH2, ATRX, TP53 genes, and H3F3A gene, which encodes histone H3, as well as the 1p19q codeletion.**

In addition, key predictive biomarkers such as **MGMT methylation, BRAF alterations, EGFR/ERBB2 amplifications, and NTRK1/2/3, ALK, FGFR1/2/3 and RET fusions** may help guide targeted treatment decisions.

Prognostic biomarkers include **IDH1/IDH2 mutations, TERT promoter mutations, CDKN2A/CDKN2B deletions, MYC/MYCN amplifications, and TP53 alterations**, which help estimate tumour behaviour and patient outcome.



Diagnosis-Related gene alterations, included in the panel, based on 2021 WHO classification of CNS tumors

Tumor Type	Genes Altered
Astrocytoma, IDH-mutant	IDH1, IDH2, ATRX, TP53, CDKN2A/B
Oligodendroglioma, IDH-mutant, and 1p/19q-codeleted	IDH1, IDH2, 1p/19q, TERT promoter, CIC, FUBP1
Glioblastoma, IDH-wildtype	IDH-wildtype, TERT promoter, EGFR
Polymorphous low-grade neuroepithelial tumor of the young	BRAF, FGFR family
Diffuse low-grade glioma, MAPK pathway-altered	FGFR1, BRAF
Diffuse midline glioma, H3 K27-altered	H3 K27, TP53, PDGFRA
Diffuse hemispheric glioma, H3 G34-mutant	H3 G34, TP53, ATRX
Diffuse pediatric-type high-grade glioma, H3-wildtype, and IDH-wildtype	IDH-wildtype, H3-wildtype, PDGFRA, MYCN, EGFR
Infant-type hemispheric glioma	NTRK family, ALK, ROS, MET
Pilocytic astrocytoma	KIAA1549-BRAF, BRAF, NF1
High-grade astrocytoma with piloid features	BRAF, NF1, ATRX
Pleomorphic xanthoastrocytoma	BRAF, CDKN2A/B
Subependymal giant cell astrocytoma	TSC1, TSC2
Ganglion cell tumors	BRAF
Dysembryoplastic neuroepithelial tumor	FGFR1
Rosette-forming glioneuronal tumor	FGFR1, PIK3CA, NF1
Diffuse leptomeningeal glioneuronal tumor	KIAA1549-BRAF fusion
Dysplastic cerebellar gangliocytoma (Lhermitte-Duclos disease)	PTEN
Extraventricular neurocytoma	FGFR (FGFR1-TACC1 fusion), IDH-wildtype
Spinal ependymomas	NF2, MYCN
Medulloblastoma, WNT-activated	CTNNB1
Medulloblastoma, SHH-activated	TP53, PTCH1, SUFU, SMO, MYCN
Medulloblastoma, non-WNT/non-SHH	MYC, MYCN
Atypical teratoid/rhabdoid tumor	SMARCB1, SMARCA4
Desmoplastic myxoid tumor of the pineal region, SMARCB1-mutant	SMARCB1
Meningiomas	SMO, H3K27, TERT promoter, CDKN2A/B
Adamantinomatous craniopharyngioma	CTNNB1
Papillary craniopharyngioma	BRAF

Accreditations & Certifications



Clinical Reliability: ISO 15189:2022 (Cert. No. 822)* & CAP Accredited Laboratory.



Data Security: Certified according to ISO/IEC 7001:2022 for Information Security Management.



Quality Management: ISO 9001:2015 Certified Quality Management System.



Method Reliability: Gliogene® is performed using CE-IVD marked reagents/software, in compliance with IVDR.

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