RB1

- Molecular and clinical determinants of response to checkpoint inhibitor immunotherapy in glioblastoma
- Expanding clinicopathologic knowledge in high-grade glioma with pleomorphic and pseudopapillary features (HPAP): a report of two cases
- Outcomes of Radium-223 and Stereotactic Ablative Radiotherapy Versus Stereotactic Ablative Radiotherapy for Oligometastatic Prostate Cancers: The RAVENS Phase II Randomized Trial
- Genomic Signature for Initial Brain Metastasis Velocity (iBMV) in Non-Small-Cell Lung Cancer Patients: The Elusive Biomarker to Predict the Development of Brain Metastases?
- Extra-central nervous system metastasis from high-grade glioma: a single-institution experience
- IDH-mutant astrocytomas with primitive neuronal component have a distinct methylation profile and a higher risk of leptomeningeal spread
- Pediatric high-grade gliomas with concomitant RB1 and SETD2 alterations and Li-Fraumeni syndrome
- Ginsenoside Rb1 ameliorates hippocampal neuroinflammation in rats after intracerebral hemorrhage by inactivating the TLR4/NF-kB pathway

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The RB1 gene provides instructions for making a protein called pRB. This protein acts as a tumor suppressor, which means that it regulates cell growth and keeps cells from dividing too fast or in an uncontrolled way.

The retinoblastoma gene (RB1) is a tumor suppressor gene that serves a key role in the development of numerous tumor diseases that can be downregulated by DNA methylation within its promoter region. The present study analyzed the methylation status of the RB1 promoter of 85 glioblastomas to assess its role in this tumor. To elucidate the underlying mechanism, RB1 promoter methylation was evaluated using methylation-specific PCR with subsequent evaluation of the results via gel electrophoresis using ethidium bromide. Of the 85 samples analyzed, only one demonstrated RB1-promoter methylation. While there are contradictory results on this matter in the literature, this study is, to the best of our knowledge, the largest on this topic to date as well as the first to use the World Health Organization Classification of Tumors of the Central Nervous System 2016. The results of the present indicated that the RB1 promoter methylation does not serve a role in the development and progression of glioblastoma [1].

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Urbschat S, Breitfelder G, Henia M, Schulz-Schaeffer W, Sippl C, Oertel J, Ketter R. RB1-promoter methylation in glioblastoma: A rare event in glioblastoma. Oncol Rep. 2023 Jul;50(1):143. doi: 10.3892/or.2023.8580. Epub 2023 Jun 2. PMID: 37264960.