

APOBEC3C

APOBEC3C (Apolipoprotein B mRNA Editing Enzyme Catalytic Subunit 3C)

Norris GA, Willard N, Donson AM, Gaskell A, Milgrom SA, O'Neill BR, Nijmeh H, Haag M, Gilani A, Foreman NK, Dahl NA. [PDGFB:APOBEC3C fusion in congenital diffuse high-grade glioma of the brainstem](#). J Neuropathol Exp Neurol. 2022 Nov 28;nlac112. doi: 10.1093/jnen/nlac112. Epub ahead of print. PMID: 36440550.

Five prognosis-related differentially expressed [immune-related genes](#) (PR-DE-IRGs) ([CCNA2](#), [HMGB2](#), [CASP3](#), [APOBEC3C](#), and [BMP2](#)) highly associated with [glioma](#) were identified for a prognostic model through weighted gene co-expression network analysis, univariate Cox and lasso regression. Kaplan-Meier survival curves, receiver operating characteristic curves and other methods have shown that the model has good performance in predicting the glioma patients' prognosis. Further combined nomogram provided better predictive performance. The signature's guiding value in clinical treatment has also been verified by multiple analysis results. We also constructed a comprehensive competing endogenous RNA (ceRNA) regulatory network based on the protective factor BMP2 to further explore its potential role in glioma progression. Numerous immune-related biological functions and pathways were enriched in a high-risk population. Further multi-omics integrative analysis revealed a strong correlation between tumor immunosuppressive environment/IDH1 mutation and signature, suggesting that their cooperation plays an important role in glioma progression. ¹⁾

3: Wang JJ, Wang H, Zhu BL, Wang X, Qian YH, Xie L, Wang WJ, Zhu J, Chen XY, Wang JM, Ding ZL. Development of a prognostic model of glioma based on immune- related genes. Oncol Lett. 2021 Feb;21(2):116. doi: 10.3892/ol.2020.12377. Epub 2020 Dec 15. PMID: 33376548; PMCID: PMC7751470.

4: Wang W, Li J, Lin F, Guo J, Zhao J. Expression and prognostic value of mRNAs in lower grade glioma with MGMT promoter methylated. J Clin Neurosci. 2020 May;75:45-51. doi: 10.1016/j.jocn.2020.03.037. Epub 2020 Mar 28. PMID: 32229069.

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Fan X, Zhang L, Huang J, Zhong Y, Fan Y, Zhou T, Lu M. An Integrated Immune- Related Bioinformatics Analysis in Glioma: Prognostic Signature's Identification and Multi-Omics Mechanisms' Exploration. Front Genet. 2022 May 3;13:889629. doi: 10.3389/fgene.2022.889629. PMID: 35601497; PMCID: PMC9114310.

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