IMAT1

Invasive meningioma-associated transcript 1 (IMAT1) is a long non-coding RNA located on Homo sapiens chromosome 17 that were identified by Ding et al. based on absolute expression differences in invasive and non-invasive meningiomas. The studies indicated that IMAT1 was highly expressed in invasive meningiomas compared with non-invasive meningiomas. In vitro studies showed that IMAT1 promoted meningioma cell invasion through the inactivation of the Krüppel-like factor 4 (KLF4)/hsa-miR22-3p/Snai1 pathway by acting as a sponge for hsa-miR22-3p, and IMAT1 knockdown effectively restored the tumor-suppressive properties of KLF4 by preserving its tumor suppressor pathway. In vivo experiments confirmed that IMAT1 silencing could significantly inhibit the growth of subcutaneous tumors and prolong the survival period of tumor-bearing mice. The findings demonstrated that the high expression of IMAT1 is the inherent reason for the loss of the tumor-suppressive properties of KLF4 during meningioma progression. Therefore, they believe that IMAT1 may be a potential biological marker and treatment target for meningiomas [1)]

1)
Ding Y, Ge Y, Wang D, Liu Q, Sun S, Hua L, Deng J, Luan S, Cheng H, Xie Q, Gong Y, Zhang T. LncRNA-IMAT1 Promotes Invasion of Meningiomas by Suppressing KLF4/hsa-miR22-3p/Snai1 Pathway. Mol Cells. 2022 Jun 30;45(6):388-402. doi: 10.14348/molcells.2022.2232. PMID: 35680373.