3-Bromopyruvate

Bromopyruvate (3-BrPA) is a glycolysis inhibitor that has been reported to have a strong anti-tumour effect in many human tumours. Several studies have reported that 3-BrPA could inhibit glioma progression; however, its role on the interstitial cells in the glioma microenvironment has not been investigated. In previous studies, Sheng et al. found that in the glioma microenvironment, glioma stem cells can induce the malignant transformation of macrophages and dendritic cells. In a study, they focused on the effects of 3-BrPA on malignantly transformed macrophages and dendritic cells. First, they found that 3-BrPA inhibited the proliferation of malignantly transformed macrophages and dendritic cells in a dose-dependent and time-dependent manner. Further study indicated that 3-BrPA significantly decreased extracellular lactate and inhibited the clone formation, migration and invasion of malignantly transformed macrophages and dendritic cells. Using an online database and a series of experiments, they demonstrated that 3-BrPA inhibits the malignant progression of malignantly transformed macrophages and dendritic cells via the miR-449a/MCT1 axis. These findings built experimental basis for new approach against glioma [1].

Unclassified

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