S1P3

Astrocytic sphingosine-1 phosphate receptor 3 (S1P3) is upregulated in the neuroinflammatory response of the highly permeable lesions, and is expressed in patients' brain metastases. S1P3 inhibition functionally tightens the BTB in vitro and in vivo. S1P3 mediates its effects on BTB permeability through astrocytic secretion of IL-6 and CCL2, which relaxes endothelial cell adhesion. Tumor cell overexpression of S1P3 mimics this pathway, enhancing IL-6 and CCL-2 production and elevating BTB permeability. In conclusion, neuroinflammatory astrocytic S1P3 modulates BTB permeability [1)].

1)
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