Role Of Glycogen Synthase Kinase 3 in The Regulation Of Vascular Smooth Muscle Cell Glucose Transport And Function

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Glycogen synthase kinase-3 (GSK-3) is a protein kinases that plays a role in the regulation of glucose transport and metabolism. GSK-3 is involved in the regulation of the cytoskeleton, cell proliferation, and apoptosis. The enzyme is activated by insulin and growth factors, and its inhibition by insulin increases glucose transport and metabolism. The inhibition of GSK-3 by insulin receptor substrate-1 (IRS-1) leads to increased glucose transport and metabolism. In addition, GSK-3 inhibition by insulin also leads to increased Akt activation, which in turn increases glucose transport and metabolism.

The role of GSK-3 in the regulation of glucose transport and metabolism is further supported by studies showing that GSK-3 inhibition increases glucose transport and metabolism in various cell types, including vascular smooth muscle cells. The role of GSK-3 in the regulation of glucose transport and metabolism is also supported by studies showing that GSK-3 inhibition increases glucose transport and metabolism in response to growth factors, such as insulin and IGF-1.

In conclusion, GSK-3 is a key regulator of glucose transport and metabolism, and its inhibition by insulin and growth factors leads to increased glucose transport and metabolism. The role of GSK-3 in the regulation of glucose transport and metabolism is further supported by studies showing that GSK-3 inhibition increases glucose transport and metabolism in various cell types, including vascular smooth muscle cells. The role of GSK-3 in the regulation of glucose transport and metabolism is also supported by studies showing that GSK-3 inhibition increases glucose transport and metabolism in response to growth factors, such as insulin and IGF-1.