Dopamine transporter

The dopamine transporter is a protein that is responsible for regulating the concentration of the neurotransmitter dopamine in the brain by reuptaking it into presynaptic neurons. It is a transmembrane protein that spans the cell membrane of dopamine-producing neurons and functions by removing dopamine from the synaptic cleft after it has been released from the presynaptic terminal.

The dopamine transporter plays a crucial role in the regulation of dopamine signaling in the brain and is a target for drugs used in the treatment of neurological and psychiatric disorders such as attention deficit hyperactivity disorder (ADHD) and Parkinson's disease. Drugs such as amphetamines and cocaine also act on the dopamine transporter, leading to an increase in dopamine levels in the synaptic cleft and producing their characteristic psychoactive effects.

Striatal dopamine transporter