Endothelial NOS

Endothelial NOS (eNOS), also known as nitric oxide synthase 3 (NOS3) or constitutive NOS (cNOS), is an enzyme that in humans is encoded by the NOS3 gene located in the 7q35-7q36 region of chromosome 7.

This enzyme is one of three isoforms that synthesize nitric oxide (NO), a small gaseous and lipophilic molecule that participates in several biological processes.

The other isoforms include neuronal nitric oxide synthase (nNOS), which is constitutively expressed in specific neurons of the brain and inducible nitric oxide synthase (iNOS), whose expression is typically induced in inflammatory diseases.

[eNOS is primarily responsible for the generation of NO in the vascular endothelium, a monolayer of flat cells lining the interior surface of blood vessels, at the interface between circulating blood in the lumen and the remainder of the vessel wall.

NO produced by eNOS in the vascular endothelium plays crucial roles in regulating vascular tone, cellular proliferation, leukocyte adhesion, and platelet aggregation. Therefore, a functional eNOS is essential for a healthy cardiovascular system.