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# Roxadustat

National Cancer Institute

## Source

National Cancer Institute. *Roxadustat*. NCI Thesaurus. Code C141436.

An orally bioavailable, hypoxia-inducible factor prolyl hydroxylase inhibitor (HIF-PHI), with potential anti-anemic activity. Upon administration, roxadustat binds to and inhibits HIF-PHI, an enzyme responsible for the degradation of transcription factors in the HIF family under normal oxygen conditions. This prevents HIF breakdown and promotes HIF activity. Increased HIF activity leads to an increase in endogenous erythropoietin production, thereby enhancing erythropoiesis. It also reduces the expression of the peptide hormone hepcidin, improves iron availability, and boosts hemoglobin (Hb) levels. HIF regulates the expression of genes in response to reduced oxygen levels, including genes required for erythropoiesis and iron metabolism.