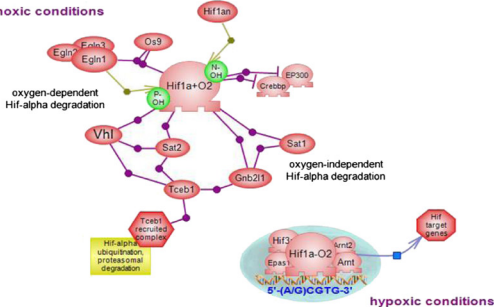


View Ontology Report**Description**

Maintaining adequate levels of oxygen is crucial for the proper functioning of cells and tissues as either excess or deficiency of oxygen can have profound pathological consequences. Oxygen is the terminal electron acceptor of the respiratory chain - the electron transport pathway (ETC) whose resulting electrochemical proton gradient drives the synthesis of ATP. ETC also produces reactive oxygen species (ROS) and it is thought that the switch to glycolysis for ATP production when oxygen levels b_ [more]

Pathway Diagram:**normoxic conditions**

ARIADNE

GO TO:

- [Genes](#)
- [Altered Pathway](#)
- [Additional Elements](#)

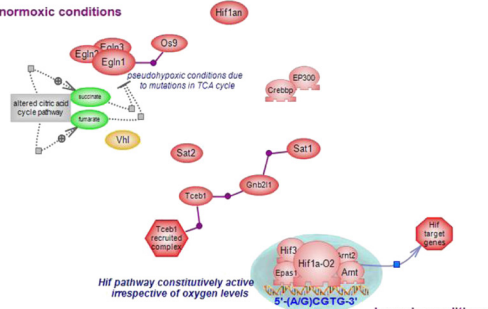
Genes in Pathway:

	Rat	Mouse	Human
hypoxia inducible factor 1α			
	Symbol	Object Name	

- [Disease annotations to Pathway Genes](#)

ALTERED HYPOXIA INDUCIBLE FACTOR PATHWAY (PW:0001102)**View Ontology Report****Description**

Hypoxia inducible factor (Hif) pathway is the master regulator of oxygen homeostasis. Under normoxic conditions, the Hif alpha proteins are subject to hydroxylation by prolyl and asparagyl hydroxylases whose own enzymatic activities are oxygen dependent and require iron and 2-oxoglutarate as cofactors. The modified prolines are recognized by Von Hippel-Landau (Vhl), the component of E3 ubiquitin ligase complex that targets them for proteasomal degradation (the modified asparagine blocks the im_ [more])

Pathway Diagram:**normoxic conditions**

ARIADNE

GO TO:

- [Genes](#)
- [Disease annotations to Pathway Genes](#)
- [Pathway annotations to Pathway Genes](#)
- [References](#)
- [Ontology path Diagram](#)