

5 aminolevulinic acid



5-Aminolevulinic acid

It is formed by the condensation of **glycine** and **succinyl-CoA** (succinyl-CoA) via the intermediate **adipate** (2-amino-3-oxo-1,6-hexanedioic acid), which is subsequently decarboxylated (removes CO_2) to form 5-aminolevulinic acid.

The reaction is catalyzed by **aminolevulate synthase** (ALA-synthase, ALAS), located in the **mitochondrial matrix**. Pyridoxal-5-phosphate acts as a cofactor, forming a temporary Schiff base with glycine. Enzyme activity is sensitive to vitamin B_6 deficiency. 5-aminolevulinic acid is the **starting precursor** in the metabolism of **heme**.



Links

Related articles

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References

- MATOUŠ, Bohuslav, et al. *Základy lékařské chemie a biochemie*. 2010. edition. Praha : Galen, 2010. 0 pp. ISBN 978-80-7262-702-8.