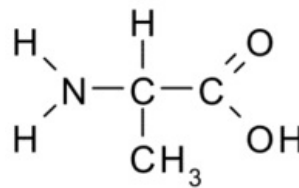


Alanine

Alanine (Ala, A) is a non-polar, non-essential α-amino acid.

Alanine metabolism

The metabolism of alanine ranks among amino acids of the pyruvate group together with other amino acids - Gly, Cys, Ser, Thr. Alanine is produced in the body by transamination (glutamate – alanine), where pyridoxal phosphate (PLP) is an important cofactor, and further during the degradation of tryptophan, where it undergoes changes over 8 reactions. Transaminase ALT (alanine aminotransferase, older name *glutamate-pyruvate transaminase*) occurs in the cytoplasm of cells and its activity is determined in the serum or plasma of patients, especially when liver disease is suspected. Unlike AST (*aspartate aminotransferase*), it does not occur in mitochondria. The increase occurs most often with liver damage and typically with viral hepatitis. ALT is released already at a small damage to hepatocytes based on an increase in the permeability of the hepatocyte membrane. Alanine is the main amino nitrogen fraction of blood plasma, but also an important part of the bacterial wall. Metabolic disorders are not known.



Alanine molecule

Links

Related Articles

- Amino acids

References

- MATOUŠ, Bohuslav. *Fundamentals of medical chemistry and biochemistry*. 2010. edition. Galen, 2010. ISBN 978-80-7262-702-8.

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