

Actin

Actin is a protein macromolecule that is one of the basic components of the **actin myofilament** – a complex structure that forms the contractile apparatus of the muscle fiber (in addition to actin, troponin and tropomyosin - they are also part of the actin myofilament).

Structure

The skeleton of the actin myofilament is formed by **F-aktin** in the form of a 1 μm long **double helix**. This double helix is made up of more than 400 **G-aktin**. Each of the G-actin molecules contains a place that is capable of interacting with the „head“ of myosin. This place is blocked by the tropomyosin molecule during the state of relaxation of the contractile complex.

For more detailed information, see Excitation-contraction coupling in skeletal muscle.

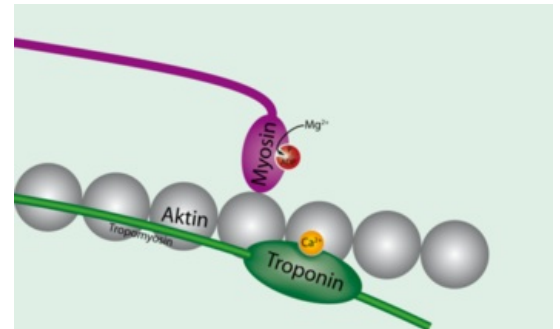
Links

Related articles

- Myosin
- Myofibril ultrastructure, contraction mechanism
- Muscle
- Connection of excitation and contraction

References

- KITTNAR, Otomar. *Lékařská fyziologie*. 1. edition. Praha : Grada, 2011. 790 pp. ISBN 978-80-247-3068-4.



Intrraction of actin and myosin