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Cryo-EM structure of the actin/myosin/tropomyosin complex

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Our cryo-EM structure of the actin-tropomyosin-myosin complex provides novel insights into the interaction between actin, myosin and tropomyosin. The pseudo-atomic model of the complex obtained from fitting crystal structures into the map defines the large actin-myosin-tropomyosin interface and the molecular interactions between the proteins in detail. It indicates that the N-terminus of actin is involved in this interaction. Our data suggest that tropomyosin is stabilized by electrostatic interactions with myosin and likely slides rather than rolls on F-actin when moving from the blocked to the myosin-bound state [1].


Keywords: helical reconstruction, actin, myosin