## Force generation[[1]](#footnote-20)

With ATP consumption from Cortassa, 2006[[2]](#footnote-22) tTe rate of ATP hydrolysis associated with force generation through actomyosin ATPase depends explicitly on both ATP and ADP, as previously demonstrated.

## Force generation parameters

| Symbol | Value | Units | Description |
| --- | --- | --- | --- |
|  |  |  | Transition rate from tropomyosin permissive to nonpermissive |
|  |  |  | Sarcomere length |
|  |  |  | Transition rate from weak to strong crossbridge |
|  |  |  | Minimum transition rate from strong to weak crossbridge |
|  |  |  | Conversion factor normalizing to physiological force |
|  |  |  | Conversion factor normalizing to physiological force |
|  |  |  | ATP half-saturation constant of AM ATPase |
|  |  |  | ADP inhibition constant of AM ATPase |

1. Rice JJ, Jafri MS, Winslow RL. Modeling short-term interval-force relations in cardiac muscle. Am J Physiol Heart Circ Physiol. 2000 Mar;278(3):H913-31. [APS](https://www.physiology.org/doi/full/10.1152/ajpheart.2000.278.3.H913) [↑](#footnote-ref-20)
2. Cortassa S, Aon MA, O’Rourke B, et al. A computational model integrating electrophysiology, contraction, and mitochondrial bioenergetics in the ventricular myocyte. Biophys J. 2006;91(4):1564-89. [PMC1518641](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1518641/) [↑](#footnote-ref-22)