

## Non-muscle Myosin II Regulatory Light Chain human, recombinant, *E. coli*

Cat. No.	Amount
PR-394	100 µg

For *in vitro* use only  
Quality guaranteed for 12 months  
Store at -80°C

### Avoid freeze / thaw cycles

### Form

Liquid. Supplied in 20 mM HEPES-KOH pH 7.0, 50 mM NaCl, 1 mM EDTA and 1 mM DTT.

### Activity

Assayed for phosphorylation by MLCK.

### Purity

>95% by SDS-PAGE

### Description

Non-muscle myosins are required for cytokinesis at the end of cell division, when a contractile ring near the plasmalemma divides the cytoplasm of the daughter cells. They are involved in cytoplasmic streaming movements in tissues, and especially in activation of motile cells such as fibroblasts and macrophages. Activation of nonmuscle myosin-II is achieved by phosphorylation of Ser<sup>33</sup> in the motif KKRQRATSN by a dedicated, Ca<sup>2+</sup>/Calmodulin regulated light chain kinase (MLCK).

### Selected References:

- Somlyo *et al.* (2000) Signal transduction by G-proteins, Rhokinase and protein phosphatase to smooth muscle and nonmuscle myosin II. *Journal of Physiology* **522**:177.
- Davis *et al.* (2001) The overall pattern of cardiac contraction depends on a spatial gradient of myosin regulatory light chain phosphorylation. *Cell* **107**:631.
- Davis *et al.* (2002) Kinetic effects of myosin regulatory light chain phosphorylation an skeletal muscle contraction. *Biophysical Journal* **83**:359.