

Myosin II Isoform Antibody Sampler Kit



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For Research Use Only. Not for Use in Diagnostic Procedures.

| Product Includes | Product # | Quantity | Mol. Wt | Isotype/Source |
|--------------------------------------|-----------|----------|---------|----------------|
| Myosin IIa Antibody | 3403 | 40 µl | 230 kDa | Rabbit |
| Myosin IIb (D8H8) XP® Rabbit mAb | 8824 | 40 µl | 230 kDa | Rabbit IgG |
| Myosin IIc (D4A7) Rabbit mAb | 8189 | 40 µl | 230 kDa | Rabbit IgG |
| Anti-rabbit IgG, HRP-linked Antibody | 7074 | 100 µl | | Goat |

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Myosin II Isoform Antibody Sampler Kit is an economical way to examine the total protein levels of myosin II isoforms a, b, and c. The kit includes enough primary and secondary antibodies to perform four Western blot experiments.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Background

Nonmuscle myosin is an actin-based motor protein essential to cell motility, cell division, migration, adhesion, and polarity. The holoenzyme consists of two identical heavy chains and two sets of light chains. The light chains (MLCs) regulate myosin II activity and stability. The heavy chains (NMHCs) are encoded by three genes, *MYH9*, *MYH10*, and *MYH14*, which generate three different nonmuscle myosin II isoforms, IIa, IIb, and IIc, respectively (reviewed in 1). While all three isoforms perform the same enzymatic tasks, binding to and contracting actin filaments coupled to ATP hydrolysis, their cellular functions do not appear to be redundant and they have different subcellular distributions (2-5). The carboxy-terminal tail domain of myosin II is important in isoform-specific subcellular localization (6). Research studies have shown that phosphorylation of myosin IIa at Ser1943 contributes to the regulation of breast cancer cell migration (7).

Background References

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