

**Anti-Myosin IIA Heavy Chain (C-terminal region) Antibody**  
**Catalog # AN1843****Specification****Anti-Myosin IIA Heavy Chain (C-terminal region) Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P35579</a>
Reactivity	Bovine
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	226532

**Anti-Myosin IIA Heavy Chain (C-terminal region) Antibody - Additional Information**

Gene ID 4627

**Other Names**

NMHC-IIA, MYH9, myosin heavy chain

**Target/Specificity**

Nonmuscle myosin II is an actin-based motor protein essential to cell motility, cell division, migration, adhesion and polarity. This myosin forms a hexameric complex comprised of two heavy chains (NMHC-II), two essential light chains, and two regulatory light chains (RLC). In vertebrates, there are three NMHC-II isoforms (NMHC-IIA, NMHC-IIB, and NMHC-IIC), which exhibit distinct patterns of expression in cells and tissues. Regulation of NMHC-II activity occurs through RLC and HC phosphorylation. RLCs are phosphorylated at Thr-18 and Ser-19, leading to activation of myosin II motor activity and increased myosin filament stability. By contrast, PKC phosphorylation of Ser-1/Ser-2 and Thr-9 in RLC may decrease activated myosin II interaction with actin. NMHC-II phosphorylation may be an important mode for regulating myosin-II assembly. PKC phosphorylates NMHC-IIA on Ser-1916 in the C-terminal region and NMHC-IIB on multiple serines in the tailpiece. Casein kinase II phosphorylates NMHC-IIA on Ser-1943 in the tailpiece and increases disassembly of NMHC-IIA filaments.

**Dilution**

WB~~1:1000

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Anti-Myosin IIA Heavy Chain (C-terminal region) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Shipping**

Blue Ice

**Anti-Myosin IIA Heavy Chain (C-terminal region) Antibody - Protocols**

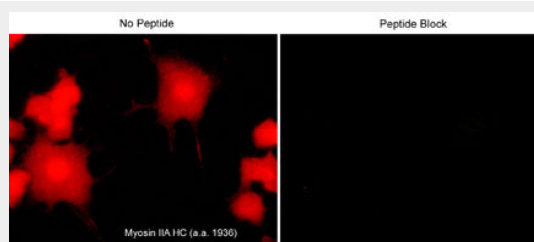
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-Myosin IIA Heavy Chain (C-terminal region) Antibody - Images



Western blot image of human A431 cells. The blots were untreated (lanes 1 & 3) or treated with lambda phosphatase (lanes 2 & 4), then probed with rabbit polyclonal Myosin IIA Heavy Chain (Ser-1943), phospho-specific antibody (lanes 1 & 2) or rabbit polyclonal Myosin IIA Heavy Chain (a.a. 1936-1950) antibody (lanes 3 & 4).



Immunocytochemical labeling of Slingshot-1L in rat PC12 cells differentiated with NGF. The cells were labeled with rabbit polyclonal anti-Myosin IIA Heavy Chain (a.a. 1936-1950), then detected using appropriate secondary antibody conjugated to Cy3. The antibody was used in the absence (left) or presence (right) of blocking peptide (MX3795).

### Anti-Myosin IIA Heavy Chain (C-terminal region) Antibody - Background

Nonmuscle myosin II is an actin-based motor protein essential to cell motility, cell division, migration, adhesion and polarity. This myosin forms a hexameric complex comprised of two heavy chains (NMHC-II), two essential light chains, and two regulatory light chains (RLC). In vertebrates, there are three NMHC-II isoforms (NMHC-IIA, NMHC-IIB, and NMHC-IIC), which exhibit distinct patterns of expression in cells and tissues. Regulation of NMHC-II activity occurs through RLC and HC phosphorylation. RLCs are phosphorylated at Thr-18 and Ser-19, leading to activation of myosin

II motor activity and increased myosin filament stability. By contrast, PKC phosphorylation of Ser-1/Ser-2 and Thr-9 in RLC may decrease activated myosin II interaction with actin. NMHC-II phosphorylation may be an important mode for regulating myosin-II assembly. PKC phosphorylates NMHC-IIA on Ser-1916 in the C-terminal region and NMHC-IIB on multiple serines in the tailpiece. Casein kinase II phosphorylates NMHC-IIA on Ser-1943 in the tailpiece and increases disassembly of NMHC-IIA filaments.