

# Myosin IXb (H-200): sc-99126

## BACKGROUND

Myosin IXb, also designated Myosin 9B, MYO9B, CELIAC4 and MYR5, is a single-headed myosin that moves processively on Actin filaments in the minus-end direction, making it the first myosin superfamily member identified that travels in the reverse direction. Isolated cDNAs of human Myosin IXB from liver and small intestine libraries encode a 2,022 amino acid protein that maps to chromosome 19p13.11. Studies indicate that Myosin IXb binds calmodulin through IQ motifs situated in its neck domain and, like other CALM1-containing myosins, exhibits maximal velocity of actin filaments in the absence of calcium, contains putative calmodulin light chains and is a calcium-regulated, mechanochemically active motor that demonstrates Rho GAP activity. Research has shown a significant and replicable association of celiac disease to a common irregularity located in intron 28 of the Myosin IXB gene, which encodes an atypical myosin molecule that functions in the remodeling of Actin in epithelial enterocytes. Individuals homozygous with respect to the at-risk allele have a 2.3-times higher risk of celiac disease.

## REFERENCES

1. Bähler, M., et al. 1997. Physical Myosin myr 5, to chromosome 19p13.1. *Genomics* 43: 107-109.
2. Post, P.L., et al. 1998. Human Myosin-IXb is a mechanochemically active motor and a GAP for rho. *J. Cell Sci.* 111: 941-950.
3. Inoue, A., et al. 2002. Myosin IXb is a single-headed minus-end-directed processive motor. *Nat. Cell Biol.* 4: 302-306.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602129. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Post, P.L., et al. 2002. Myosin-IXb is a single-headed and processive motor. *J. Biol. Chem.* 277: 11679-11683.
6. O'Connell, C.B. and Mooseker, M.S. 2003. Native Myosin-IXb is a plus-, not a minus-end-directed motor. *Nat. Cell Biol.* 5: 171-172.

## CHROMOSOMAL LOCATION

Genetic locus: MYO9B (human) mapping to 19p13.11; Myo9b (mouse) mapping to 8 B3.3.

## SOURCE

Myosin IXb (H-200) is a rabbit polyclonal antibody raised against amino acids 1521-1720 (Deletion 1613) mapping within an internal region of Myosin IXb of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

Myosin IXb (H-200) is recommended for detection of Myosin IXb isoforms Long and Short of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Myosin IXb (H-200) is also recommended for detection of Myosin IXb isoforms Long and Short in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Myosin IXb siRNA (h): sc-61124, Myosin IXb siRNA (m): sc-61125, Myosin IXb shRNA Plasmid (h): sc-61124-SH, Myosin IXb shRNA Plasmid (m): sc-61125-SH, Myosin IXb shRNA (h) Lentiviral Particles: sc-61124-V and Myosin IXb shRNA (m) Lentiviral Particles: sc-61125-V.

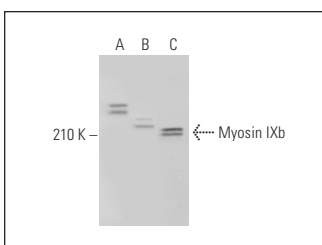
Molecular Weight of Myosin IXb: 229 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, K-562 whole cell lysate: sc-2203 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Myosin IXb (H-200): sc-99126. Western blot analysis of Myosin IXb expression in K-562 (A), HL-60 (B) and NTERA-2 cl.D1 (C) whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.