

# Vimentin (D21H3) XP® Rabbit mAb (HRP Conjugate)

✓ 100 µl  
(10 western blots)



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New 07/13

**For Research Use Only. Not For Use In Diagnostic Procedures.**

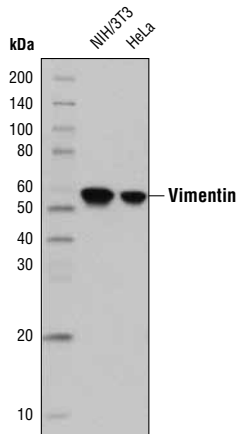
Applications W Endogenous	Species Cross-Reactivity* H, M, R, Mk	Molecular Wt. 57 kDa	Isotype Rabbit IgG
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**Description:** This Cell Signaling Technology antibody is conjugated to the carbohydrate groups of horseradish peroxidase (HRP) via its amine groups. The HRP conjugated antibody is expected to exhibit the same species cross-reactivity as the unconjugated Vimentin (D21H3) XP® Rabbit mAb #5741.

**Background:** The cytoskeleton consists of three types of cytosolic fibers: microfilaments (actin filaments), intermediate filaments, and microtubules. Major types of intermediate filaments are distinguished by their cell-specific expression: cytokeratins (epithelial cells), glial fibrillary acidic protein (GFAP) (glial cells), desmin (skeletal, visceral, and certain vascular smooth muscle cells), vimentin (mesenchyme origin), and neurofilaments (neurons). GFAP and vimentin form intermediate filaments in astroglial cells and modulate their motility and shape (1). In particular, vimentin filaments are present at early developmental stages, while GFAP filaments are characteristic of differentiated and mature brain astrocytes. Thus, GFAP is commonly used as a marker for intracranial and intraspinal tumors arising from astrocytes (2). Research studies have shown that vimentin is present in sarcomas, but not carcinomas, and its expression is examined in conjunction with that of other markers to distinguish between the two (3). Vimentin's dynamic structural changes and spatial re-organization in response to extracellular stimuli help to coordinate various signaling pathways (4). Phosphorylation of vimentin at Ser56 in smooth muscle cells regulates the structural arrangement of vimentin filaments in response to serotonin (5,6). Remodeling of vimentin and other intermediate filaments is important during lymphocyte adhesion and migration through the endothelium (7).

**Specificity/Sensitivity:** Vimentin (D21H3) XP® Rabbit mAb (HRP Conjugate) recognizes endogenous levels of total vimentin protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg45 of human vimentin protein.



Western blot analysis of extracts from NIH/3T3 and HeLa cells using Vimentin (D21H3) XP® Rabbit mAb (HRP Conjugate).

Entrez Gene ID #7431  
UniProt ID #P08670

**Storage:** Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. Do not aliquot the antibodies.

**\*Species cross-reactivity is determined by western blot using the unconjugated antibody.**

**HRP-conjugated antibodies do not require incubation with a secondary antibody.**

## Recommended Antibody Dilutions:

Western blotting 1:1000

**For product specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).**

**Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended complementary products.**

## Background References:

- (1) Eng, L.F. et al. (2000) *Neurochem. Res.* 25, 1439-1451.
- (2) Goebel, H.H. et al. (1987) *Acta Histochem. Suppl.* 34, 81-93.
- (3) Leader, M. et al. (1987) *Histopathology* 11, 63-72.
- (4) Helfand, B.T. et al. (2004) *J. Cell Sci.* 117, 133-141.
- (5) Tang, D.D. et al. (2005) *Biochem. J.* 388, 773-783.
- (6) Fomina, I.G. et al. (1990) *Klin. Med. (Mosk.)* 68, 125-127.
- (7) Nieminen, M. et al. (2006) *Nat. Cell Biol.* 8, 156-162.

**IMPORTANT:** For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.