**Applications**

- **Endogenous**

| W | IHC-P | IF-IC | F |

**Species Cross-Reactivity**

- **H, M, R, Mk**

**Molecular Wt.**

- **57 kDa**

**Isotype**

- **Rabbit IgG**

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**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 (mesenchymal 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). 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 helps 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 detects 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.

**Background References:**


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**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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.**

**Recommended Antibody Dilutions:**

- Western blotting: 1:1000
- Immunohistochemistry (Parafin): 1:200
- Flow Cytometry: 1:50

**For application specific protocols please see the web page for this product at www.cellsignal.com.**

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**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.
Immunohistochemical analysis of paraffin-embedded human tonsil using Vimentin (D21H3) XP® Rabbit mAb in the presence of control peptide (left) or antigen-specific peptide (right).

Flow cytometric analysis of HeLa cells, using Vimentin (D21H3) XP® Rabbit mAb (blue) compared to Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (red).