iFluor™ 647 Conjugated Anti-Vimentin Antibody [D4-B11]

HA601646F

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	IF-Tissue, FC
Molecular Wt:	Predicted band size: 54 kDa
Clone number:	D4-B11

Description: Vimentin is a structural protein that in humans is encoded by the VIM gene. Its name comes from the Latin vimentum which refers to an array of flexible rods. Vimentin is a type III intermediate filament (IF) protein that is expressed in mesenchymal cells. IF proteins are found in all animal cells[6] as well as bacteria. Intermediate filaments, along with tubulin-based microtubules and actin-based microfilaments, comprises the cytoskeleton. All IF proteins are expressed in a highly developmentally-regulated fashion; vimentin is the major cytoskeletal component of mesenchymal cells. Because of this, vimentin is often used as a marker of mesenchymally-derived cells or cells undergoing an epithelial-to-mesenchymal transition (EMT) during both normal development and metastatic progression. Vimentin plays a significant role in supporting and anchoring the position of the organelles in the cytosol. Vimentin is attached to the nucleus, endoplasmic reticulum, and mitochondria, either laterally or terminally.

Conjugate: iFluor™ 647, Ex: 656nm; Em: 670nm.

Immunogen: Synthetic peptide within C-terminal human Vimentin.

Positive control: Human skin tissue, human kidney tissue, HeLa.

Subcellular location: Cytoplasm

Database links: SwissProt: P08670 Human

Recommended Dilutions:

IF-Tissue	1:100
FC	1 μg/mL

Storage Buffer: 1*PBS (pH7.4), 1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

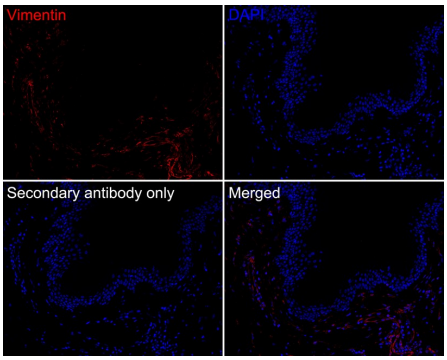

Fig1: Immunofluorescence analysis of paraffin-embedded human skin tissue labeling Vimentin with Mouse anti-Vimentin antibody (HA601646F) at 1/100 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA601646F, red) at 1/100 dilution overnight at 4 ℃, washed with PBS. Nuclei were counterstained with DAPI (blue).

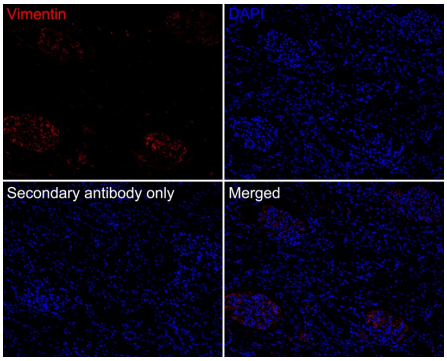

Fig2: Immunofluorescence analysis of paraffin-embedded human kidney tissue labeling Vimentin with Mouse anti-Vimentin antibody (HA601646F) at 1/100 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA601646F, red) at 1/100 dilution overnight at 4 ℃, washed with PBS. Nuclei were counterstained with DAPI (blue).

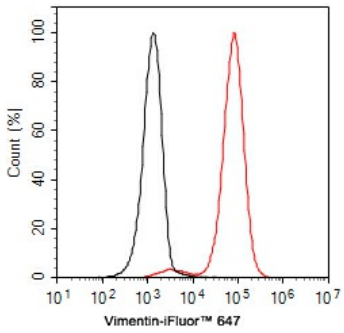

Fig3: Flow cytometric analysis of HeLa cells labeling Vimentin.

Cells were fixed and permeabilized. Then incubated for 1 hour at +4℃ with Vimentin (HA601646F, red, 1ug/ml). Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. "Aurora-B regulates the cleavage furrow-specific vimentin phosphorylation in the cytokinetic process." Goto H., Yasui Y., Kawajiri A., Nigg E.A., Terada Y., Tatsuka M., Nagata K., Inagaki M. J. Biol. Chem. 278:8526-8530(2003)
2. "Specific in vivo phosphorylation sites determine the assembly dynamics of vimentin intermediate filaments." Eriksson J.E., He T., Trejo-Skalli A.V., Harmala-Brasken A.-S., Hellman J., Chou Y.-H., Goldman R.D. J. Cell Sci. 117:919-932(2004)
3. "The cellular distribution of serotonin transporter is impeded on serotonin-altered vimentin network." Ahmed B.A., Bukhari I.A., Jeffus B.C., Harney J.T., Thyparambil S., Ziu E., Fraer M., Rusch N.J., Zimniak P., Lupashin V., Tang D., Kilic F. PLoS ONE 4:E4730-E4730(2009)