

Alexa Fluor® 555 anti-Vimentin Antibody

Catalog# / Size	677815 / 25 µg 677816 / 100 µg
Clone	O91D3
Regulatory Status	RUO
Other Names	CTRCT30, HEL 113, Epididymis Luminal Protein 113
Isotype	Mouse IgG2a, κ
Description	Vimentin are class-III intermediate filaments found in various non-epithelial cells, especially mesenchymal cells. Vimentin is a widely expressed and highly conserved 54 kD protein that is constitutively expressed in mesenchymal cells, endothelial cells lining blood vessels, renal tubular cells, macrophages, neutrophils, fibroblasts, and leukocytes ^{1,2} . Vimentin is used as a marker of mesenchymal cells to distinguish them from epithelial cells ³ . Increased vimentin expression is frequently used as an EMT marker in cancer ⁴ . Autoantibodies to vimentin are commonly found in patients with autoimmune diseases such as Lupus ⁵ and rheumatoid arthritis ⁶ , and also found after transplantation ⁷ .

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Full length human vimentin produced in <i>E. coli</i> .
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 555 under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICC - Quality tested IHC-P - Verified
Recommended Usage	Each lot of this antibody is quality control tested by immunocytochemistry. For immunocytochemistry, a concentration range of 2.5 - 10.0 µg/mL is recommended. For immunohistochemistry, a concentration range of 1.0 - 10.0 µg/mL is suggested. It is recommended that the reagent be titrated for optimal performance for each application. * Alexa Fluor® 555 has an excitation maximum of 555 nm, and a maximum emission of 565 nm. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Additional Product Notes	For use in immunohistochemistry on formalin-fixed paraffin-embedded tissue (IHC-P), it is recommended to perform antigen retrieval using either Citrate Buffer, 10X (Cat. No. 420902) or Tris-EDTA pH 9.0 Antigen Retrieval Buffer (10X) (Cat. No. 422704). For use in immunocytochemistry (ICC), it is recommended to fix/permeabilize with either of the following: -Fixation buffer (Cat. No. 420801) with 0.5 % Triton X-100

-Fixation buffer (Cat. No. 420801) with 100% ice-cold methanol
-100% ice-cold methanol only

Application References

(PubMed link indicates
BioLegend citation)

1. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA*. 117:33455-33465. (SB) [PubMed](#)
2. Radtke AJ, *et al.* 2022. *Nat Protoc*. 17:378-401. (SB) [PubMed](#)

RRID

AB_3720600 (BioLegend Cat. No. 677815)

Antigen Details

Structure	466 amino acids with a predicted molecular weight of approximately 54 kD.
Distribution	Cytoplasm.
Function	Vimentins are class-III intermediate filaments found in various non-epithelial cells, especially mesenchymal cells. Vimentin is attached to the nucleus, endoplasmic reticulum, and mitochondria, either laterally or terminally.
Interaction	HCV core protein, LGSN, SYNM, PLEC, SLC6A4, STK33, LARP6, RAB8B, TOR1A, TOR1AIP1, and BCAS3.
Cell Type	B cells, Mesenchymal Stem Cells, Neural Stem Cells, Neutrophils
Biology Area	Cell Adhesion, Cell Biology, Cell Motility/Cytoskeleton/Structure, Immunology, Neuroscience, Neuroscience Cell Markers, Stem Cells
Molecular Family	Intermediate Filaments
Antigen References	1. Kidd ME, <i>et al.</i> 2014. <i>Am. J. Respir. Cell Mol. Biol.</i> 50:1. 2. Fuchs E, <i>et al.</i> 1994. <i>Annu. Rev. Biochem.</i> 63:345. 3. Zeisberg M, <i>et al.</i> 2009. <i>J. Clin. Invest.</i> 119:1429. 4. Scanlon CS, <i>et al.</i> 2013. <i>J. Dent. Res.</i> 92:114. 5. Thebault S, <i>et al.</i> 2002. <i>J. Immunol.</i> 169:4046. 6. Vossenaar ER, <i>et al.</i> 2004. <i>Arthritis Res. Ther.</i> 6:R142. 7. Rose ML. 2013. <i>Hum. Immunol.</i> 74:1459.
Gene ID	7431

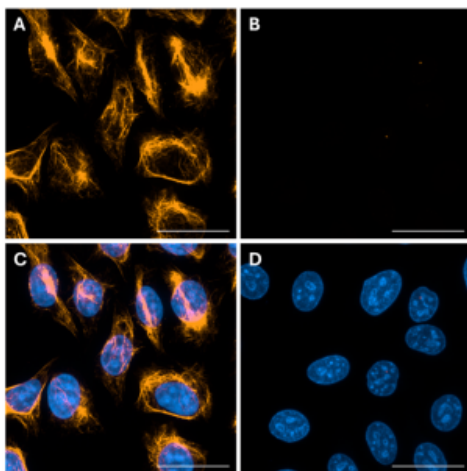
Related Protocols

- [Immunocytochemistry Staining for Methanol Fixed Cells](#)
- [Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

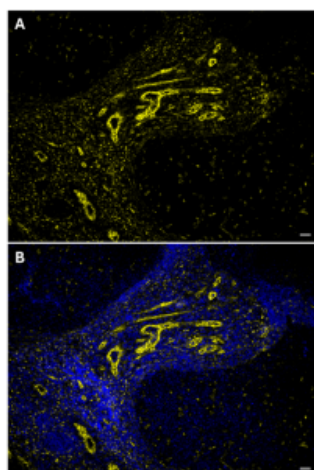
Other Formats

TotalSeq™-Bn1302 anti-Vimentin, Purified anti-Vimentin, Alexa Fluor® 488 anti-Vimentin, Alexa Fluor® 647 anti-Vimentin, PerCP/Cyanine5.5 anti-Vimentin, Alexa Fluor® 555 anti-Vimentin, Alexa Fluor® 594 anti-Vimentin

Product Data



HeLa cells were fixed and permeabilized with 100% ice-cold methanol for 10 minutes, and blocked with 5% FBS for 1 hour at room temperature. Cells were then stained with Alexa Fluor® 555 anti-Vimentin (clone O91D3) (panel A) or Alexa Fluor® 555 Mouse IgG2a, κ Isotype Control (panel B). Nuclei were counterstained with DAPI (Cat. No. 422801). The images were captured on a Revvity Operetta CLS™ High Content Analysis System with a 63X objective and merged (panels C and D). Scale bar: 50 μm



IHC staining with Alexa Fluor® 555 anti-Vimentin (clone O91D3) on formalin-fixed paraffin-embedded human tonsil tissue. Following antigen retrieval using 1X Tris-EDTA pH 9.0 Antigen Retrieval Buffer (Cat. No. 422704), the tissue was incubated with Alexa Fluor® 555 anti-Vimentin (clone O91D3) (panel A). Nuclei were counterstained with DAPI (Cat. No. 422801). Images were captured with a 10X objective and merged (panel B). Scale bar: 50 μm

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