

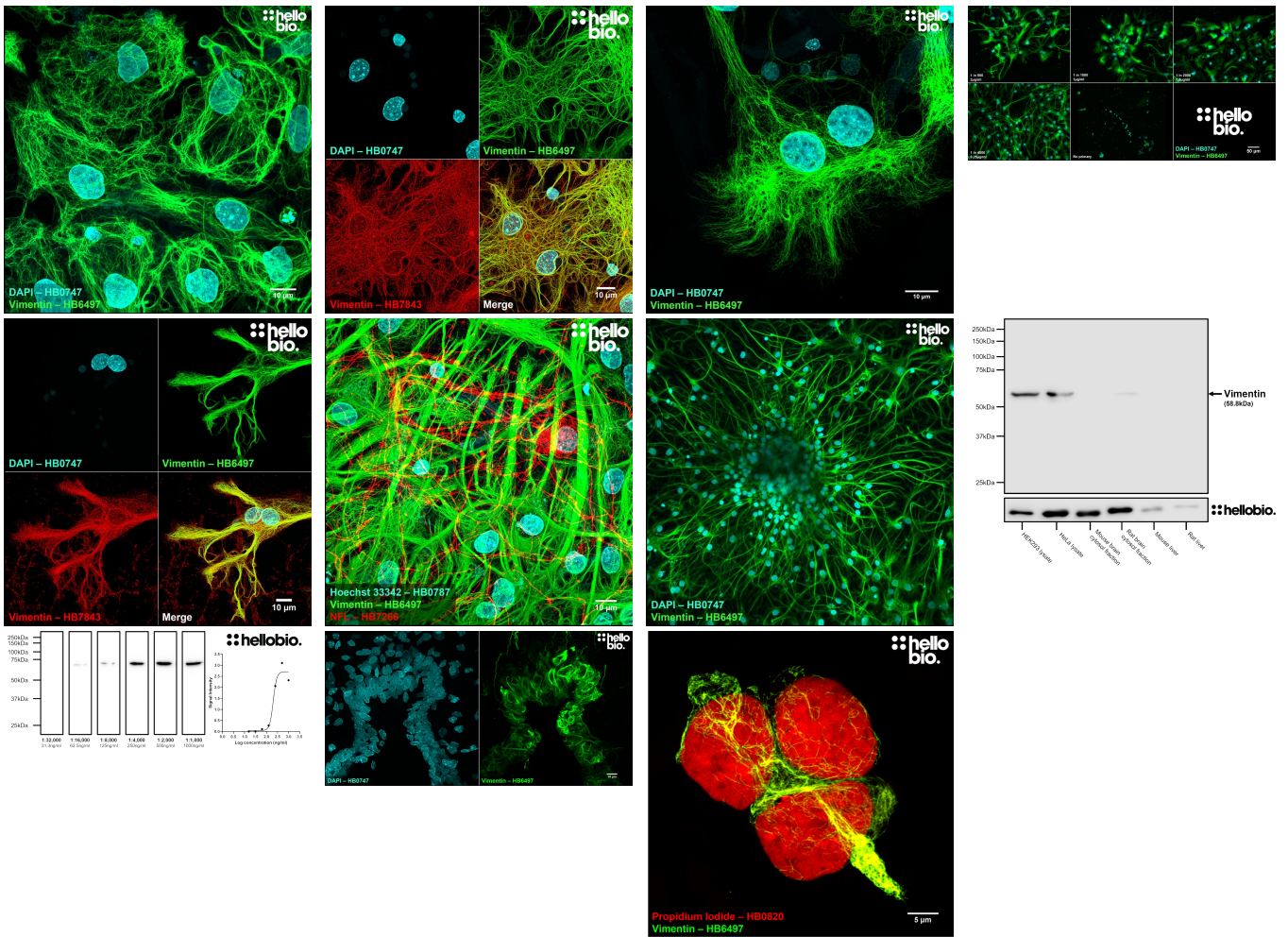
# DATASHEET

## Anti-Vimentin antibody ValidAb™

### Product overview

<b>Name</b>	Anti-Vimentin antibody ValidAb™
<b>Cat No</b>	HB6497
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Target</b>	Vimentin
<b>Description</b>	Monoclonal antibody to Vimentin - class III intermediate filament expressed in mesenchymal cells used as a marker of epithelial-mesenchymal transition. Part of the ValidAb™ range of highly validated, data-rich antibodies.

### Validation data



### Product information

<b>Immunogen</b>	Full length recombinant human vimentin expressed in and purified from E. coli
<b>Epitope</b>	Amino acids 409 - 425 (SRISLPLNFSSLNRET)

Clone number	2D1
Isotype	IgG2a
Purification	Protein G affinity chromatography
Concentration	1 mg/ml
Formulation	50% PBS, 50% glycerol plus 5mM sodium azide
Predicted species reactivity	Rat, Human
Tested species reactivity	Rat, Human, Mouse (no staining)

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## Tested applications

Applications	ICC, WB, IHC(IF)
Western blot optimal concentration	0.2µg/ml (1:5,000) as tested in HEK293T and HeLa cell lysates. We have only been able to successfully test this antibody in human derived cell lines with animal tissues showing mostly negative results.
IHC(IF) optimal concentration	1µg/ml (1:1000) as tested in 4% PFA fixed rat brain sections
ICC optimal concentration	0.25µg/ml (1:4000) as tested in mixed primary rat neuronal cultures.
Positive control	Vimentin is highly expressed in human cell lines such as HEK293 and HeLa while also being expressed at high levels in glia within the CNS.
Negative control	Vimentin is not expressed in some human derived cell lines such as HepG2 and RT4 cells while in tissue samples vimentin is not expressed in hepatocytes but is in other cell types within the liver.
Open data link	Please follow <a href="#">this link</a> to the OSF.

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## Target information

UniProt ID	P08670
Gene name	VIM
NCBI full gene name	VIM - Vimentin
Entrez gene ID	<a href="#">7431</a>
Amino acids	466 - 53.65kDa
Isoforms	Vimentin has no fully described isoforms.
Expression	Vimentin is expressed in tissues with a mesenchymal origin including glia, fibroblasts, endothelial cells lining blood vessels, renal tubular cells and many cells of the immune system amongst others. Vimentin is also expressed in cells undergoing an epithelial-mesenchymal transition therefore used as a marker for this.
Subcellular expression	Vimentin is expressed in the intermediate filaments of the cytoskeleton.
Processing	The initiator methionine is removed to form the mature protein.
Post translational modifications	Subject to phosphorylation on multiple residues alongside possessing sumoylation, N-6 acetylation and N-6 succinylation sites.
Homology (compared to human)	Mouse and rat show 97.4% identity to human Vimentin in a BLAST search.
Similar proteins	The following proteins were identified as being similar to Vimentin in a BLAST search: <ul style="list-style-type: none"><li>• Desmin - 62.9% identity</li><li>• GFAP - 58.1% identity</li><li>• Peripherin - 57.1% identity</li></ul>
Epitope homology (between species)	In a BLAST search the epitope sequence had the following homology with: <ul style="list-style-type: none"><li>• Rat - 94.4% identity</li><li>• Human - 94.4% identity</li><li>• Mouse - 88.4%</li><li>• Chimpanzee - 94.4% identity</li><li>• Cow - 94.4% identity</li><li>• Chicken - 66.7% identity</li></ul>
Epitope homology (other proteins)	A BLAST search identified the following proteins as having similarity with the epitope sequence: <ul style="list-style-type: none"><li>• Desmin - 61.1% identity, 53.5kDa</li><li>• Peripherin - 64.3% identity, 53.6kDa</li><li>• Reelin - 56.3% identity, 388kDa</li><li>• LY6G5B - 100% identity (matched across only 7 residues, 22.5kDa)</li></ul>

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## Storage & Handling

Storage instructions	-20°C
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not

## References

### **Vimentin in cancer and its potential as a molecular target for cancer therapy.**

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### **Vimentin: Regulation and pathogenesis.**

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### **The role of GFAP and vimentin in learning and memory.**

Wilhelmsson U et al (2019) Biological chemistry 400

**PubMedID** [31063456](#)

### **Vimentin and epithelial-mesenchymal transition in human breast cancer--observations in vitro and in vivo.**

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### **Roles of vimentin in health and disease.**

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