

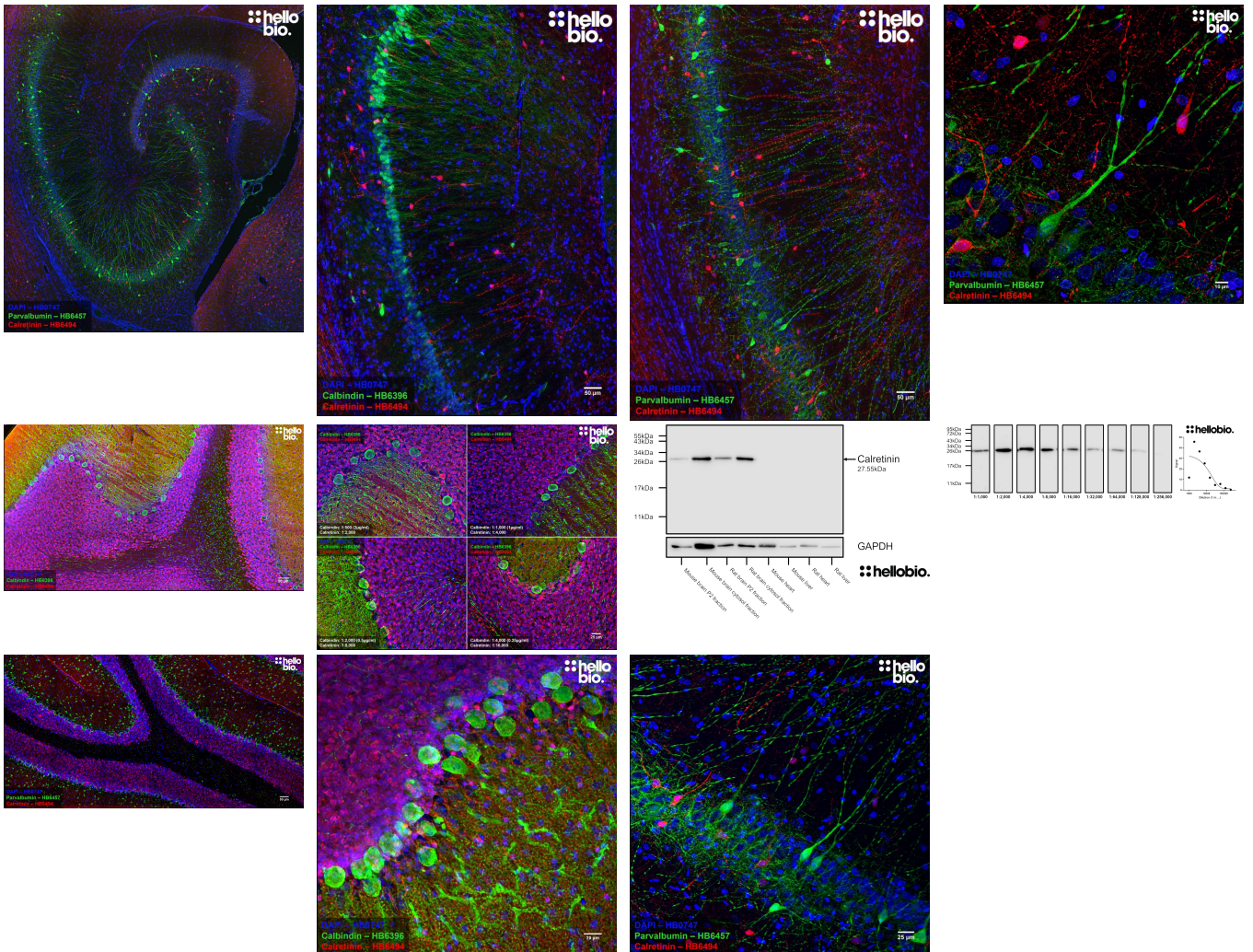
# DATASHEET

## Anti-Calretinin antibody ValidAb™

### Product overview

<b>Name</b>	Anti-Calretinin antibody ValidAb™
<b>Cat No</b>	HB6494
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Target</b>	Calretinin
<b>Description</b>	Antibody to Calretinin - calcium binding protein used as a marker for an inhibitory interneuron subtype. Part of the ValidAb™ range of highly validated, data-rich antibodies.

### Validation data



### Product information

**Immunogen** Recombinant human calretinin expressed in and purified from *E. coli*

<b>Purification</b>	Unpurified
<b>Formulation</b>	Serum + 0.03% sodium azide
<b>Predicted species reactivity</b>	Mouse, Rat, Human
<b>Tested species reactivity</b>	Mouse, Rat

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## Tested applications

<b>Applications</b>	WB, IHC(IF)
<b>Western blot optimal concentration</b>	A dilution of 1:8,000 as tested in a rat brain cytosol preparation.
<b>IHC(IF) optimal concentration</b>	A dilution of 1:4,000 as tested in paraformaldehyde fixed free-floating rat cerebellum sections.
<b>Positive control</b>	Calretinin is expressed in inhibitory interneurons in a wide range of brain regions including the cerebellum and hippocampus. Calretinin is also expressed in a wide array of cell lines (see the <a href="#">human protein atlas</a> ).
<b>Negative control</b>	Calretinin lacks expression in somatic tissues such as the liver, skin and skeletal muscle. Calretinin expression is also lacking in many cell lines such as HEK293T and HeLa.
<b>Open data link</b>	Please follow this <a href="#">link to OSF</a> .

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## Target information

<b>Other names</b>	CALB2, CAB29, CAL2, Calbindin 2, 29kDa calbindin
<b>UniProt ID</b>	P22676
<b>Gene name</b>	CALB2
<b>NCBI full gene name</b>	calbindin 2
<b>Entrez gene ID</b>	<a href="#">794</a>
<b>Amino acids</b>	271 (31.5kDa)
<b>Isoforms</b>	Calretinin only has one described isoform.
<b>Expression</b>	Calretinin is expressed widely amongst inhibitory interneurons in the brain with particularly high expression in the cerebellum and hippocampus. It is also expressed in peripheral tissues such as the testes, lung, pancreas and kidney.
<b>Subcellular expression</b>	Calretinin is primarily expressed cytosolically although some nuclear expression has been reported.
<b>Processing</b>	Calretinin is not subject to any processing before achieving an active conformation
<b>Post translational modifications</b>	Calretinin is subject to phosphorylation on tyrosine 214.
<b>Homology (compared to human)</b>	Mouse and rat calretinin show 98.5% and 98.9% homology respectively to human calretinin. Mouse and rat calretinin only show 1 amino acid difference (M271V).
<b>Similar proteins</b>	In a BLAST search only Calbindin (58.5% identity, 28kDa) was identified as being a similar protein.

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## Storage & Handling

<b>Storage instructions</b>	4°C
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

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## References

### [Calretinin: from a "simple" Ca\(2+\) buffer to a multifunctional protein implicated in many biological processes.](#)

Schwaller B (2014) *Frontiers in neuroanatomy* 8  
**PubMedID** [24550787](#)

### [Calretinin-Expressing Synapses Show Improved Synaptic Efficacy with Reduced Asynchronous Release during High-Rate Activity.](#)

Zhang C et al (2022) *The Journal of neuroscience : the official journal of the Society for Neuroscience* 42  
**PubMedID** [35165172](#)

### [Calretinin positive neurons form an excitatory amplifier network in the spinal cord dorsal horn.](#)

Smith KM et al (2019) *eLife* 8  
**PubMedID** [31713514](#)

### [Calretinin as a marker for cardiac myxoma. Diagnostic and histogenetic considerations.](#)

Terracciano LM et al (2000) American journal of clinical pathology 114

**PubMedID**

[11068550](#)

**Interneurons containing calretinin are specialized to control other interneurons in the rat hippocampus.**

Gulyás AI et al (1996) The Journal of neuroscience : the official journal of the Society for Neuroscience 16

**PubMedID**

[8627375](#)

**Structural and molecular heterogeneity of calretinin-expressing interneurons in the rodent and primate striatum.**

Garas FN et al (2018) The Journal of comparative neurology 526

**PubMedID**

[29218729](#)

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