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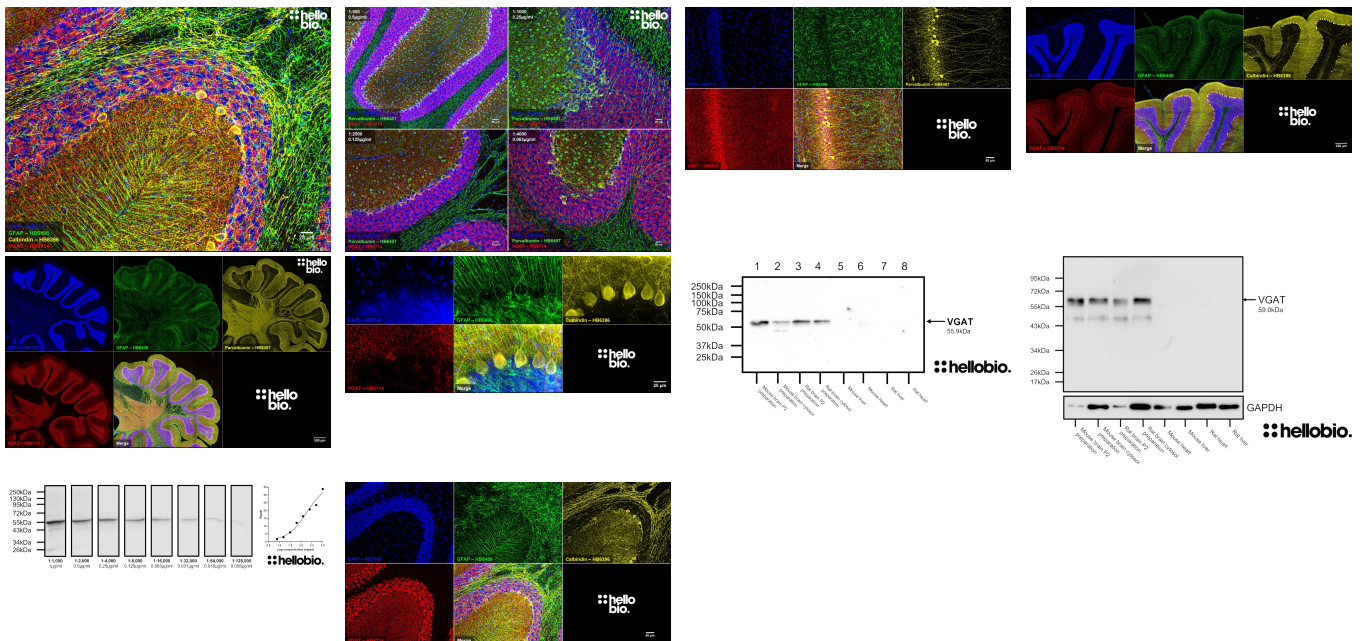
## DATASHEET

Anti-Vesicular GABA transporter (VGAT) antibody ValidAb™

### Product overview

<b>Name</b>	Anti-Vesicular GABA transporter (VGAT) antibody ValidAb™
<b>Cat No</b>	HB6714
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Target</b>	VGAT
<b>Description</b>	Antibody to VGAT - GABA transporter and GABAergic neuron marker. Part of the ValidAb™ range of highly validated, data-rich antibodies.

### Validation data



### Product information

<b>Immunogen</b>	Synthetic peptide of N-terminal rat VGAT residues conjugated to keyhole limpet hemocyanin (KLH).
<b>Isotype</b>	IgG
<b>Purification</b>	Immunogen affinity chromatography
<b>Concentration</b>	0.25 mg/ml
<b>Formulation</b>	10 mM HEPES (pH 7.5), 150 mM NaCl, 100µg/ml BSA, and 50% glycerol.
<b>Predicted species reactivity</b>	Mouse, Rat, Dog, Chicken, Cow, Monkey
<b>Tested species reactivity</b>	Mouse, Rat

### Tested applications

<b>Applications</b>	WB, IHC(IF)
<b>Western blot optimal concentration</b>	0.25µg/ml (1:1,000) as tested in a rat brain P2 membrane fraction preparation.

<b>IHC(IF) optimal concentration</b>	0.25µg/ml (1:1,000) as tested in paraformaldehyde fixed free-floating rat brain sections.
<b>Positive control</b>	VGAT is expressed widely across all brain regions in GABAergic neurones.
<b>Negative control</b>	VGAT expression is absent from most non-neural tissues (including the liver and muscle) and the vast majority of human cell lines (e.g. HEK293T and HeLa)
<b>Open data link</b>	Please follow this <a href="#">link to OSF</a> .

## Target information

<b>Other names</b>	SLC32A1, VIAAT, Vesicular inhibitory amino acid transporter
<b>UniProt ID</b>	Q9H598
<b>Gene name</b>	SLC32A1
<b>NCBI full gene name</b>	solute carrier family 32 member 1
<b>Entrez gene ID</b>	<a href="#">140679</a>
<b>Amino acids</b>	525 (57.4kDa)
<b>Isoforms</b>	VGAT has only one described isoform
<b>Expression</b>	VGAT is expressed in GABAergic interneurons and glycinergic neurons in various regions of the central nervous system (CNS), including the cortex, hippocampus, cerebellum, and spinal cord. Additionally, VGAT is also expressed in some non-neuronal cells, such as pancreatic beta cells, where it plays a role in the release of GABA as a neurotransmitter or a paracrine signaling molecule.
<b>Subcellular expression</b>	VGAT expression is localised to synapses and is not expressed in the cell bodies, axons or dendrites of neurones.
<b>Processing</b>	VGAT is not subject to any processing in order to form an active conformation
<b>Post translational modifications</b>	VGAT is subject to phosphorylation on S98 and nitration on Y186.
<b>Homology (compared to human)</b>	Mouse and rat VGAT show 98.5% identity to human VGAT. Mouse and rat VGAT homologues show 99.6% identity (A77P and L384I)
<b>Similar proteins</b>	No similar proteins to VGAT were identified in a BLAST search.

## Storage & Handling

<b>Storage instructions</b>	-20 °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

## References

### The vesicular GABA transporter, VGAT, localizes to synaptic vesicles in sets of glycinergic as well as GABAergic neurons.

Chaudhry FA et al (1998) The Journal of neuroscience : the official journal of the Society for Neuroscience 18

**PubMedID** [9822734](#)

### The physiological roles of vesicular GABA transporter during embryonic development: a study using knockout mice.

Saito K et al (2010) Molecular brain 3

**PubMedID** [21190592](#)

### Vesicular inhibitory amino acid transporter is a Cl<sup>-</sup>/gamma-aminobutyrate Co-transporter.

Juge N et al (2009) The Journal of biological chemistry 284

**PubMedID** [19843525](#)

### Constitutive phosphorylation of the vesicular inhibitory amino acid transporter in rat central nervous system.

Bedet C et al (2000) Journal of neurochemistry 75

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### Vesicular GABA transporter (VGAT) transports β-alanine.

Juge N et al (2013) Journal of neurochemistry 127

**PubMedID** [23919636](#)