



Qty: 100 µL

Rabbit anti-VGAT

Catalog No. 48-0800

Lot No.

Rabbit anti- Vesicular GABA Amino Acid Transporter (VGAT)

FORM

This affinity-purified rabbit polyclonal antibody is supplied as a 100 µL aliquot in 10 mM HEPES (pH 7.5), 150 mM NaCl containing BSA and 50% glycerol.

PAD: ZMD.633

IMMUNOGEN

Peptide corresponding to amino acid residues from the N-terminal region of rat Vesicular GABA Amino Acid Transporter (VGAT).

SPECIFICITY

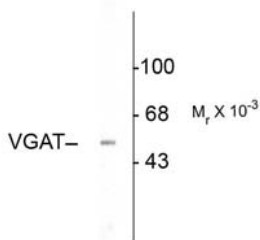
Specific for the ~53 kDa VGAT protein.

REACTIVITY

The antibody has been directly tested for reactivity in rat tissue. It is anticipated that the antibody will also work with bovine, canine and non-human primate tissues based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Sample	Western Blotting
Human	ND
Mouse	ND
Rat	+++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~53 kDa VGAT protein.

(cont'd)

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USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1:1000

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

BACKGROUND

The Vesicular GABA Amino Acid Transporter (VGAT) is responsible for transport of the inhibitory neurotransmitter into synaptic vesicles (McIntire et al., 1997). The VGAT protein (also known as the Vesicular Inhibitory Amino Acid Transporter or VIAAT) is expressed in synaptic vesicles of both glycine and GABAergic synapses throughout the CNS (Chaudhry et al., 1998). Expression of the VGAT protein changes during development and also in response to patterns of neuronal activity (De et al., 2005).

REFERENCES

Chaudhry FA, Reimer RJ, Bellocchio EE, Danbolt NC, Osen KK, Edwards RH, Storm-Mathisen J (1998) The vesicular GABA transporter, VGAT, localizes to synaptic vesicles in sets of glycinergic as well as GABAergic neurons. *J Neurosci* 18:9733-9750.

De GS, Schafer MK, Defamie N, Chen C, Ricci A, Weihe E, Varoqui H, Erickson JD (2005) Homeostatic scaling of vesicular glutamate and GABA transporter expression in rat neocortical circuits. *J Neurosci* 25:7121-7133.

McIntire SL, Reimer RJ, Schuske K, Edwards RH, Jorgensen EM (1997) Identification and characterization of the vesicular GABA transporter. *Nature (Lond)* 389:870-876.

RELATED PRODUCTS

<i>Product</i>	<i>Conjugate</i>	<i>Cat. No.</i>
Protein A	Sepharose 4B	10-1041
rec-Protein G	Sepharose 4B	10-1241
ZyMAX™ Goat anti-rabbit IgG	Unconjugated	81-6100
ZyMAX™ Goat anti-mouse IgG	Unconjugated	81-6500

Secondary antibody conjugates.

<i>Conjugate</i>	<i>Goat anti-rabbit IgG (H+L)</i>	<i>Goat anti-mouse IgG (H+L)</i>	<i>Ex/Em*</i>	<i>Fluorescence similar to--</i>
Alexa Fluor® 488	A11008	A11001	495/519	FITC
Alexa Fluor® 555	A21428	A21422	555/565	Cy3
Alexa Fluor® 594	A11012	A11005	590/617	Texas Red
Alexa Fluor® 647	A21244	A21235	650/668	Cy5
HRP	81-6120	81-6520	NA**	NA
AP	81-6122	81-6522	NA	NA
Biotin	B2770	B2763	NA	NA

*Excitation/emission (nm); **Not applicable

For additional secondary antibody conjugates, visit www.invitrogen.com/antibodies

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