

## VGAT (C-19): sc-49573

### BACKGROUND

Synaptic transmission involves the controlled exocytosis of vesicles containing specific neurotransmitters. Usually, neurotransmitters are synthesized in the cytoplasm of the cell and must be transported into synaptic vesicles for release. The vesicular GABA transporter (VGAT) is responsible for loading  $\gamma$ -aminobutyric acid (GABA), an inhibitory neurotransmitter, from neuronal cytoplasm into synaptic vesicles and is expressed only in the nerve endings of inhibitory neurons that contain GABA and/or glycine. During neocortical development, VGAT expression barely precedes the maturation of inhibitory synaptogenesis, suggesting that it may contribute to the development of neocortical GABAergic circuitry. VGAT may also play a role in epileptogenesis and the recovery mechanisms that occur after a spontaneous seizure.

### REFERENCES

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### CHROMOSOMAL LOCATION

Genetic locus: SLC32A1 (human) mapping to 20q11.23; Slc32a1 (mouse) mapping to 2 H1.

### SOURCE

VGAT (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of VGAT of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-49573 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

VGAT (C-19) is recommended for detection of Vesicular inhibitory amino acid transporter (VGAT) of mouse, rat and human origin bWestern Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

VGAT (C-19) is also recommended for detection of Vesicular inhibitory amino acid transporter (VGAT) in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for VGAT siRNA (h): sc-61782, VGAT siRNA (m): sc-61783, VGAT shRNA Plasmid (h): sc-61782-SH, VGAT shRNA Plasmid (m): sc-61783-SH, VGAT shRNA (h) Lentiviral Particles: sc-61782-V and VGAT shRNA (m) Lentiviral Particles: sc-61783-V.

Molecular Weight of VGAT: 57 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.



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Try **VGAT (F-2): sc-393373**, our highly recommended monoclonal alternative to VGAT (C-19).