

# BGT-1 (M-16): sc-241911

## BACKGROUND

BGT-1, also known as sodium- and chloride-dependent betaine transporter, SLC6A12 (solute carrier family 6 member 12) or Na<sup>+</sup>/Cl<sup>-</sup> betaine/GABA transporter, is a 614 amino acid protein. As a multi-pass membrane protein, BGT-1 localizes to liver, heart, skeletal muscle and placenta and is widely distributed in brain. BGT-1 has the typical structure of neurotransmitter transporters, with 12 transmembrane domains and a large extracellular loop between the third and fourth transmembrane domains. BGT-1 transports betaine and GABA, and may have a role in regulation of GABAergic transmission in the brain through the reuptake of GABA into presynaptic terminals, as well as in osmotic regulation. BGT-1 is associated with mucus production in asthma, and could affect reversibility of lung function abnormalities in aspirin-intolerant asthma patients. BGT-1 displays significant functional differences from the other members of the GABA transporter family.

## REFERENCES

1. Borden, L.A., et al. 1995. Cloning and expression of a betaine/GABA transporter from human brain. *J. Neurochem.* 64: 977-984.
2. Borden, L.A., et al. 1995. Re-evaluation of GABA transport in neuronal and glial cell cultures: correlation of pharmacology and mRNA localization. *Recept. Channels* 3: 129-146.
3. Denkert, C., et al. 1998. Osmolyte strategy in human monocytes and macrophages: involvement of p38MAPK in hyperosmotic induction of betaine and myoinositol transporters. *Arch. Biochem. Biophys.* 354: 172-180.
4. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 603080. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Matskevitch, I., et al. 1999. Functional characterization of the Betaine/ $\gamma$ -aminobutyric acid transporter BGT-1 expressed in *Xenopus* oocytes. *J. Biol. Chem.* 274: 16709-16716.

## CHROMOSOMAL LOCATION

Genetic locus: Slc6a12 (mouse) mapping to 6 F1.

## SOURCE

BGT-1 (M-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of BGT-1 of mouse 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-241911 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

BGT-1 (M-16) is recommended for detection of BGT-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for BGT-1 siRNA (m): sc-141694, BGT-1 shRNA Plasmid (m): sc-141694-SH and BGT-1 shRNA (m) Lentiviral Particles: sc-141694-V.

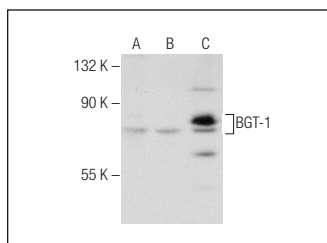
Molecular Weight of BGT-1: 69 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, BC3H1 cell lysate: sc-2299 or rat brain extract: sc-2392.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



BGT-1 (M-16): sc-241911. Western blot analysis of BGT-1 expression in KNRK (A) and BC3H1 (B) whole cell lysates and rat brain tissue extract (C).

## RESEARCH USE

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

**MONOS**  
Satisfaction  
Guaranteed

Try **BGT-1 (D-5): sc-514024**, our highly recommended monoclonal alternative to BGT-1 (M-16).