

# SLC6A2 (H-67): sc-67216

## BACKGROUND

The norepinephrine transporter encoded by SLC6A2 is a multi-pass membrane protein that terminates noradrenergic signaling by rapid re-uptake of neuronally released norepinephrine (NE) into presynaptic terminals. It belongs to the sodium: neurotransmitter symporter (SNF) family and interacts with PRKCABP. The norepinephrine transporter regulates NE-mediated behavioral and physiological effects, including mood, depression, feeding behavior, cognition, regulation of blood pressure and heart rate. Consequently, the norepinephrine transporter is the target of several drugs used in the treatment or diagnosis of disorders, including depression, attention-deficit hyperactivity disorder and feeding disturbances. Defects in SLC6A2, the gene encoding the norepinephrine transporter, can cause orthostatic intolerance, a syndrome that is associated with postural tachycardia and is characterized by lightheadedness, fatigue, altered mentation and syncope.

## REFERENCES

1. Fukumitsu, N., et al. 2006. Reduced 125I-meta-iodobenzylguanidine uptake and norepinephrine transporter density in the hearts of mice with MPTP-induced parkinsonism. *Nucl. Med. Biol.* 33: 37-42.
2. Miner, L.H., et al. 2006. Chronic stress increases the plasmalemmal distribution of the Norepinephrine Transporter and the coexpression of tyrosine hydroxylase in norepinephrine axons in the prefrontal cortex. *J. Neurosci.* 26: 1571-1578.
3. Matsunaga, W., et al. 2006. Involvement of neurotrophic factors in aging of noradrenergic innervations in hippocampus and frontal cortex. *Neurosci. Res.* 54: 313-318.
4. Smith, H.R., et al. 2006. Distribution of norepinephrine transporters in the non-human primate brain. *Neuroscience* 138: 703-714.

## CHROMOSOMAL LOCATION

Genetic locus: SLC6A2 (human) mapping to 16q12.2; Slc6a2 (mouse) mapping to 8 C5.

## SOURCE

SLC6A2 (H-67) is a rabbit polyclonal antibody raised against amino acids 551-617 mapping within a C-terminal cytoplasmic domain of norepinephrine transporter of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

SLC6A2 (H-67) is recommended for detection of norepinephrine transporter of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

SLC6A2 (H-67) is also recommended for detection of norepinephrine transporter in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SLC6A2 siRNA (h): sc-61215, SLC6A2 siRNA (m): sc-61216, SLC6A2 shRNA Plasmid (h): sc-61215-SH, SLC6A2 shRNA Plasmid (m): sc-61216-SH, SLC6A2 shRNA (h) Lentiviral Particles: sc-61215-V and SLC6A2 shRNA (m) Lentiviral Particles: sc-61216-V.

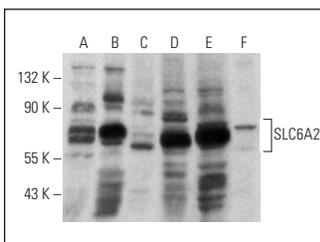
Molecular Weight of SLC6A2: 58 kDa.

Positive Controls: rat brain extract: sc-2392, mouse heart extract: sc-2254 or RT-4 whole cell lysate: sc-364257.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



SLC6A2 (H-67): sc-67216. Western blot analysis of SLC6A2 expression in human brain (A), human spinal cord (B), rat brain (C), human tonsil (D) and mouse heart (E) tissue extracts and RT-4 whole cell lysate (F).

## SELECT PRODUCT CITATIONS

1. Alba-Delgado, C., et al. 2012. Chronic pain leads to concomitant noradrenergic impairment and mood disorders. *Biol. Psychiatry* 73: 54-62.

## RESEARCH USE

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