

## BOCT (E-12): sc-138147

### BACKGROUND

BOCT (brain-type organic cation transporter), also known as Solute carrier family 22 member 17, is a 538 amino acid protein that belongs to the major facilitator superfamily as well as the organic cation transporter family. BOCT is considered a multi-pass membrane protein and is highly conserved. BOCT is expressed in brain and is abundantly expressed in erythroid cells. Known to be a receptor for NGAL, BOCT transports iron-lacking LCN2 into cells. BOCT exists as two alternatively spliced isoforms and its expression is suppressed by c-Abl oncoprotein. The BOCT gene maps to chromosome 14q11.2. Chromosome 14 contains about 700 genes and 106 million base pairs and makes up about 3.5% of human cellular DNA. Chromosome 14 encodes the presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease.

### REFERENCES

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3. Devireddy, L.R., et al. 2005. A cell-surface receptor for lipocalin 24p3 selectively mediates apoptosis and iron uptake. *Cell* 123: 1293-1305.
4. Yan, D., et al. 2006. A novel locus for autosomal dominant non-syndromic deafness, DFNA53, maps to chromosome 14q11.2-q12. *J. Med. Genet.* 43: 170-174.
5. Lee, S., et al. 2007. A dual role of lipocalin 2 in the apoptosis and deramification of activated microglia. *J. Immunol.* 179: 3231-3241.
6. Albani, D., et al. 2007. Presenilin-1 mutation E318G and familial Alzheimer's disease in the Italian population. *Neurobiol. Aging.* 28: 1682-1688.
7. Vinuesa, E., et al. 2008. Lipocalin-2-induced renal regeneration depends on cytokines. *Am. J. Physiol. Renal Physiol.* 295: F1554-F1562.

### CHROMOSOMAL LOCATION

Genetic locus: SLC22A17 (human) mapping to 14q11.2; Slc22a17 (mouse) mapping to 14 C3.

### SOURCE

BOCT (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BOCT 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.

Blocking peptide available for competition studies, sc-138147 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### RESEARCH USE

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

### APPLICATIONS

BOCT (E-12) is recommended for detection of BOCT isoforms 1 and 2 of mouse, rat and human origin by Western 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).

BOCT (E-12) is also recommended for detection of BOCT isoforms 1 and 2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for BOCT siRNA (h): sc-92100, BOCT siRNA (m): sc-141722, BOCT shRNA Plasmid (h): sc-92100-SH, BOCT shRNA Plasmid (m): sc-141722-SH, BOCT shRNA (h) Lentiviral Particles: sc-92100-V and BOCT shRNA (m) Lentiviral Particles: sc-141722-V.

Molecular Weight of BOCT: 58 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.

### PROTOCOLS

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