

# SB144 (D-13): sc-138601

## BACKGROUND

SB144, also known as TMUB1 (transmembrane and ubiquitin-like domain containing 1), is a 246 amino acid multi-pass membrane protein that contains one ubiquitin-like domain. Highly expressed in the nervous system and brain, SB144 exists in a synaptosomal membrane fraction, facilitating the recycling of the AMPAR subunit GluR2 to the cell surface. Predominantly nuclear during growth arrest and actively exported from the nucleus in dividing cells, SB144 interacts with EEF1A1. SB144 may contribute to the regulation of translation during cell-cycle progression and to the regulation of cell proliferation. SB144 amino acid sequences are highly conserved (89% identity) between the human and mouse genomes. The SB144 gene is conserved in dog, cow, mouse, rat, chicken and zebrafish, and maps to human chromosome 7q36.1.

## REFERENCES

1. Liang, H., et al. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. *Proc. Natl. Acad. Sci. USA* 95: 3781-3785.
2. Clark, H.F., et al. 2003. The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. *Genome Res.* 13: 2265-2270.
3. Hillier, et al. 2003. The DNA sequence of human chromosome 7. *Nature* 424: 157-164.
4. Scherer, S.W., et al. 2003. Human chromosome 7: DNA sequence and biology. *Science* 300: 767-772.
5. Della Fazio, M.A., et al. 2005. HOPS: a novel cAMP-dependent shuttling protein involved in protein synthesis regulation. *J. Cell Sci.* 118: 3185-3194.
6. Liu, G.Y., et al. 2009. Cloning and characterization of DULP, a novel ubiquitin-like molecule from human dendritic cells. *Cell. Mol. Immunol.* 6: 27-33.
7. Zhang, W., et al. 2010. Transmembrane and ubiquitin-like domain containing 1 (Tmub1) regulates locomotor activity and wakefulness in mice and interacts with CAMLG. *PLoS ONE* 5: e11261.

## CHROMOSOMAL LOCATION

Genetic locus: TMUB1 (human) mapping to 7q36.1.

## SOURCE

SB144 (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SB144 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-138601 P, (100 µg 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

SB144 (D-13) is recommended for detection of TMUB1 of 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); non cross-reactive with TMUB2.

Suitable for use as control antibody for SB144 siRNA (h): sc-89766, SB144 shRNA Plasmid (h): sc-89766-SH and SB144 shRNA (h) Lentiviral Particles: sc-89766-V.

Molecular Weight of SB144: 26 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.

## RESEARCH USE

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

## PROTOCOLS

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