



## ASMTL (A-12): sc-84225

### BACKGROUND

Serotonin, a monoamine neurotransmitter associated with neuronal modulation of emotions, is synthesized by serotonergic neurons of the central nervous system through metabolism of the essential amino acid L-tryptophan. In the pineal gland, serotonin can be transformed into the circadian regulatory hormone melatonin by ASMT (acetylserotonin O-methyltransferase) which catalyzes the final reaction in the synthesis pathway. ASMTL (N-acetylserotonin O-methyltransferase-like protein) is a 621 amino acid protein with a putative catalytic S-adenosyl-L-methionine domain that shares high genetic homology to ASMT. The ASMTL protein is encoded by a gene from the PAR1 region of the X and Y chromosomes, which is considered to be a fusion product of two evolutionarily disparate genes. ASMTL, with potential cytoplasmic localization, is abundant in pancreas, placenta, fibroblast, thymus, prostate, testis, ovary and colon. Low expression levels are found in spleen, small intestine and leukocytes.

### REFERENCES

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3. Cavallo, A. 1993. The pineal gland in human beings: relevance to pediatrics. *J. Pediatr.* 123: 843-851.
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5. Llambías, E.B., Mazzetti, M.B., Lelli, S.M., Aldonatti, C. and San Martín de Viale, L.C. 2007. Melatonin formation in pineal gland from rats with hexachlorobenzene experimental porphyria. *Int. J. Toxicol.* 26: 545-551.
6. Zmijewski, M.A., Sweatman, T.W. and Slominski, A.T. 2009. The melatonin-producing system is fully functional in retinal pigment epithelium (ARPE-19). *Mol. Cell. Endocrinol.* Published.

### CHROMOSOMAL LOCATION

Genetic locus: ASMTL (human) mapping to Xp22.33/Yp11.32.

### SOURCE

ASMTL (A-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of ASMTL of human origin.

### 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.

### PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84225 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

ASMTL (A-12) is recommended for detection of ASMTL 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).

Suitable for use as control antibody for ASMTL siRNA (h): sc-91584, ASMTL shRNA Plasmid (h): sc-91584-SH and ASMTL shRNA (h) Lentiviral Particles: sc-91584-V.

Molecular Weight of ASMTL: 68 kDa.

### 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) 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.

### RESEARCH USE

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