SANTA CRUZ BIOTECHNOLOGY, INC.

TOB2 (m2): 293T Lysate: sc-124210

BACKGROUND

TOB1 (TROB, APRO6, PIG49) and TOB2 (TOB4, TROB2, TOBL) are anti-proliferative proteins that modulate cell cycle progression from the G_0/G_1 to S phases through interactions with the mammalian homologue of yeast Caf1. TOB proteins present in the central nervous system may be engaged in acquisition of motor skill. TOB1 in T lymphocytes can interact with Smad2/4, augment SMAD DNA binding to the IL-2 promoter, and lead to an inhibition of IL-2 transcription. In oncogenic ErbB-2-transformed cells, nuclear export of TOB1 results in a decrease in antiproliferative activity. ERK/MAPK (ERK 2) and JNK/SAPK (JNK2) phosphorylate TOB1 *in vitro,* and TOB1 can undergo phosphorylation at Ser 152, Ser 154 and Ser 164 by ERK 1/2 upon growth-factor stimulation. TOB2 gene encodes a 4.1-kb transcript with high expression in skeletal muscle, thymus and ovary.

REFERENCES

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4. Yoshida, Y., et al. 2000. Negative regulation of BMP/Smad signaling by TOB in osteoblasts. Cell 103: 1085-1097.
5. Tzachanis, D., et al. 2001. TOB is a negative regulator of activation that is expressed in anergic and quiescent T cells. Nat. Immunol. 2: 1174-1182.
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7. Suzuki, T., et al. 2002. Phosphorylation of three regulatory serines of TOB by ERK 1 and ERK 2 is required for Ras-mediated cell proliferation and transformation. Genes Dev. 16: 1356-1370.
8. Kawamura-Tsuzuku, J., et al. 2004. Nuclear localization of TOB is important for regulation of its antiproliferative activity. Oncogene 23: 6630-6638.
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CHROMOSOMAL LOCATION

Genetic locus: Tob2 (mouse) mapping to 15 E2.

PRODUCT

TOB2 (m2): 293T Lysate represents a lysate of mouse TOB2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

TOB2 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive TOB2 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.