



CREB3L1 (h): 293T Lysate: sc-174782

BACKGROUND

CREB3L1 (cAMP-responsive element-binding protein 3-like protein 1), also designated OASIS (old astrocyte specifically induced substance), is a 519 amino acid transcription factor that activates unfolded protein response target genes during endoplasmic reticulum (ER) stress. CREB3L1 may be specifically involved in the ER-stress response in astrocytes of the central nervous system. CREB3L1 increases inducible NOS1 expression and downregulates ASCT1, a receptor for Syncytin-1, which is highly expressed in glia of individuals affected by multiple sclerosis. CREB3L1 is localized to the ER membrane until the ER undergoes stress, at which point CREB3L1 is cleaved sequentially by proteases SKI-1 and S2P and its N-terminus translocates into the nucleus. There are two isoforms of CREB3L1 that are produced as a result of alternative splicing events.

REFERENCES

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3. Kondo, S., et al. 2005. OASIS, a CREB/ATF-family member, modulates UPR signalling in astrocytes. *Nat. Cell Biol.* 7: 186-194.
4. Murakami, T., et al. 2006. Cleavage of the membrane-bound transcription factor OASIS in response to endoplasmic reticulum stress. *J. Neurochem.* 96: 1090-1100.
5. Saito, A., et al. 2007. A novel ER stress transducer, OASIS, expressed in astrocytes. *Antioxid. Redox Signal.* 9: 563-571.
6. Panagopoulos, I., et al. 2007. Characterization of the native CREB3L2 transcription factor and the FUS/CREB3L2 chimera. *Genes Chromosomes Cancer* 46: 181-191.
7. Antony, J.M., et al. 2007. The human endogenous retrovirus envelope glycoprotein, syncytin-1, regulates neuroinflammation and its receptor expression in multiple sclerosis: a role for endoplasmic reticulum chaperones in astrocytes. *J. Immunol.* 179: 1210-1224.
8. Schubert, S.W., et al. 2008. bZIP-Type transcription factors CREB and OASIS bind and stimulate the promoter of the mammalian transcription factor GCMa/Gcm1 in trophoblast cells. *Nucleic Acids Res.* 36: 3834-3846.

CHROMOSOMAL LOCATION

Genetic locus: CREB3L1 (human) mapping to 11p11.2.

PRODUCT

CREB3L1 (h): 293T Lysate represents a lysate of human CREB3L1 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

CREB3L1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive CREB3L1 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 for detailed protocols and support products.