CREB3L1 Protein, Human (HEK293, His)

Cat. No.:	HY-P76284
Synonyms:	Cyclic AMP-responsive element-binding protein 3-like protein 1; OASIS
Species:	Human
Source:	HEK293
Accession:	Q96BA8 (E396-S519)
Gene ID:	90993
Molecular Weight:	21-31 kDa.

PROPERTIES

Appearance	Solution
Formulation	Supplied as a 0.2 μm filtered solution of PBS, PH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	The CREB3L1 protein serves as the precursor for the transcription factor form, Processed cyclic AMP-responsive element-binding protein 3-like protein 1, embedded in the endoplasmic reticulum (ER) membrane with its N-terminal DNA-binding and transcription activation domains oriented toward the cytosolic face of the membrane. In response to ER stress or DNA damage, CREB3L1 is transported to the Golgi, where it undergoes site-specific cleavage by resident proteases S1P/MBTPS1 and S2P/MBTPS2. The resulting N-terminal cytosolic domain is translocated to the nucleus, activating transcription of specific target genes involved in cell-cycle progression inhibition. This transcription factor plays a crucial role in cell type-specific DNA damage and the unfolded protein response (UPR), binding to the DNA consensus sequence 5'-GTGXGCXGC-3'. In bone formation, CREB3L1 regulates COL1A1 and possibly COL1A2 transcription, contributing to the secretion of bone matrix proteins. Additionally, it protects astrocytes from ER stress-induced cell death by binding to the cAMP response element (CRE) of the BiP/HSPA5 promoter. In astrocytes and osteoblasts, CREB3L1 inhibits cell-cycle progression after G2/M phase upon DNA damage by activating transcription of cell-cycle inhibitors like p21/CDKN1A. Furthermore, it is required for TGFB1 to activate genes involved in the assembly of collagen extracellular matrix.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA