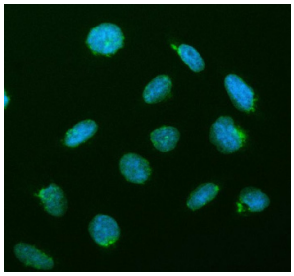
CREB3L2 Antibody / Cyclic AMP-responsive element-binding protein 3-like protein 2 (FY13206)

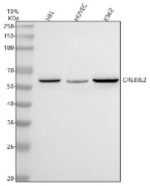
Catalog No.	Formulation	Size
FY13206	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

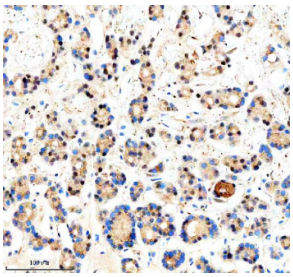
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q70SY1
Localization	ER, Nucleus
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This CREB3L2 antibody is available for research use only.



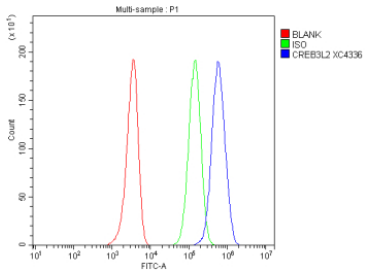
Immunofluorescent staining of CREB3L2 using anti-CREB3L2 antibody (green). CREB3L2 was detected in an immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-CREB3L2 antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of CREB3L2 using anti-CREB3L2 antibody. Lane 1: human HEL whole cell lysates, Lane 2: human HUVEC whole cell lysates, Lane 3: human K562 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CREB3L2 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected molecular weight of CREB3L2 is ~57 kDa.



Immunohistochemical staining of CREB3L2 using anti-CREB3L2 antibody. CREB3L2 was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CREB3L2 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Flow Cytometry analysis of HEL cells using anti-CREB3L2 antibody. Overlay histogram showing HEL cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CREB3L2 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

CREB3L2 antibody detects Cyclic AMP-responsive element-binding protein 3-like protein 2, a transcription factor that regulates endoplasmic reticulum (ER) stress response and secretory pathway gene expression. The UniProt recommended name is Cyclic AMP-responsive element-binding protein 3-like protein 2 (CREB3L2). This ER membrane-bound transcription factor modulates secretion, collagen synthesis, and stress adaptation through transcriptional control of Golgi and ER-resident proteins.

Functionally, CREB3L2 antibody identifies a 520-amino-acid protein anchored in the ER membrane via a C-terminal transmembrane domain. Upon ER stress or secretory stimulation, the N-terminal cytosolic fragment of CREB3L2 is cleaved and translocates to the nucleus, where it binds CRE-like sequences in target promoters to activate genes related to vesicle trafficking, extracellular matrix organization, and stress tolerance. CREB3L2 acts in concert with other bZIP transcription factors such as ATF6 and CREB3L1 to regulate protein folding and secretion.

The CREB3L2 gene is located on chromosome 7q33 and is highly expressed in secretory tissues such as cartilage, liver, and endocrine glands. It contributes to normal skeletal development and cellular adaptation to increased protein synthesis demands. CREB3L2 is also a critical determinant of collagen biosynthesis during chondrogenesis and wound repair.

Pathologically, translocations involving CREB3L2 and FUS lead to low-grade fibromyxoid sarcoma, resulting in constitutive transcriptional activation and altered differentiation. Aberrant CREB3L2 activity has also been implicated in metabolic and neurodegenerative disorders linked to ER stress. Research using CREB3L2 antibody supports studies in transcriptional control, ER stress, and tumor biology.

CREB3L2 antibody is validated for western blotting, immunofluorescence, and immunohistochemistry to detect ER-

associated transcription factors. NSJ Bioreagents provides CREB3L2 antibody reagents optimized for studies in transcriptional regulation, protein secretion, and cellular stress responses.

Structurally, Cyclic AMP-responsive element-binding protein 3-like protein 2 features a basic leucine zipper (bZIP) DNA-binding domain, an ER luminal domain involved in sensing stress signals, and a transmembrane region that anchors it to the ER. This antibody aids in studying CREB3L2's role in secretory pathway regulation, collagen production, and tumorigenic gene fusion mechanisms.

Application Notes

Optimal dilution of the CREB3L2 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human CREB3L2 was used as the immunogen for the CREB3L2 antibody.

Storage

After reconstitution, the CREB3L2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.