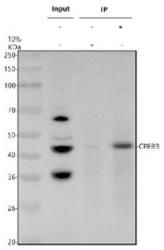
CREB3 Antibody / Cyclic AMP-responsive element-binding protein 3 (FY13192)

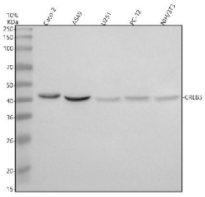
Catalog No.	Formulation	Size
FY13192	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
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	O43889
Applications	Western Blot : 0.25-0.5ug/ml Immunoprecipitation : 2-4ug/500ug of lysate ELISA : 0.1-0.5ug/ml
Limitations	This CREB3 antibody is available for research use only.



Immunoprecipitating CREB3 in whole cell lysate. Western blot analysis of CREB3 using anti-CREB3 antibody. Lane 1: whole cell lysates (30ug), Lane 2: Rabbit control IgG instead of anti-CREB3 antibody in whole cell lysate, Lane 3: anti-CREB3 antibody (2ug) + whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-CREB3 antibody at a dilution of 0.5 ug/ml and probed with a goat anti-rabbit IgG-HRP secondary antibody. The signal is developed using ECL Plus Western Blotting Substrate. The expected molecular weight of CREB3 is ~41 kDa.



Western blot analysis of CREB3 using anti-CREB3 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Caco-2 whole cell lysates, Lane 2: human whole cell lysates, Lane 3: human U251 whole cell lysates Lane 4: rat PC-12 whole cell lysates, Lane 5: mouse NIH/3T3 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-CREB3 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 an ECL Plus Western Blotting Substrate. The expected molecular weight of CREB3 is ~41 kDa.

Description

CREB3 antibody detects Cyclic AMP-responsive element-binding protein 3, a transcription factor involved in the unfolded protein response and endoplasmic reticulum (ER) stress regulation. The UniProt recommended name is Cyclic AMP-responsive element-binding protein 3 (CREB3). This ER membrane-bound transcription factor controls gene expression related to protein folding, trafficking, and secretion.

Functionally, CREB3 antibody identifies a 371-amino-acid protein anchored in the ER membrane with a cytoplasmic basic leucine zipper (bZIP) domain. Upon ER stress, the N-terminal transcriptional domain of CREB3 is cleaved and translocated to the nucleus, where it activates target genes involved in secretion and Golgi maintenance. CREB3 also regulates acute phase response genes and collagen biosynthesis.

The CREB3 gene is located on chromosome 9p13.3 and is highly expressed in secretory tissues such as liver, pancreas, and intestine. It plays a central role in adapting to increased secretory load and maintaining ER homeostasis under stress conditions.

Pathologically, dysregulation of CREB3 contributes to metabolic disorders, neurodegeneration, and cancer progression by disturbing ER stress response pathways. Overexpression can enhance tumor invasion by modulating extracellular matrix and stress-related signaling genes. Research using CREB3 antibody supports studies in transcriptional regulation, ER stress, and secretory pathway biology.

CREB3 antibody is validated for western blotting, immunofluorescence, and immunohistochemistry to detect transcription factors and stress response regulators. NSJ Bioreagents provides CREB3 antibody reagents optimized for research in cellular homeostasis, transcription, and disease adaptation.

Structurally, Cyclic AMP-responsive element-binding protein 3 contains a bZIP domain for DNA binding and dimerization, along with a luminal stress-sensing region. This antibody enables investigation of CREB3's role in ER stress signaling and transcriptional control.

Application Notes

Optimal dilution of the CREB3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human CREB3 recombinant protein (Position: M1-K352) was used as the immunogen for the CREB3 antibody.

Storage

After reconstitution, the CREB3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at

-20oC. Avoid repeated freezing and thawing.