

# CREB3L3 (G-11): sc-377156

## BACKGROUND

CREB3L3 (cAMP-responsive element-binding protein 3-like protein 3), also known as CREBH or HYST1481, is a 461 amino acid single-pass type II membrane protein that localizes to the endoplasmic reticulum (ER) and, in response to ER stress, is cleaved and translocated to the nucleus. Expressed exclusively in liver, CREB3L3 functions as a transcription factor that, during ER stress, is thought to activate genes that are involved in both the unfolded protein response and the acute phase response (APR). Additionally, CREB3L3 is under-expressed in hepatocellular carcinoma, suggesting a possible role as a tumor suppressor. CREB3L3 functions as a dimer and contains one leucine zipper domain, a KDEL-like sequence and a bZIP domain, through which it conveys its DNA binding ability. Three isoforms of CREB3L3 exist due to alternative splicing events.

## REFERENCES

- Omori, Y., et al. 2001. CREB-H: a novel mammalian transcription factor belonging to the CREB/ATF family and functioning via the box-B element with a liver-specific expression. *Nucleic Acids Res.* 29: 2154-2162.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611998. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Newman, J.R., et al. 2003. Comprehensive identification of human bZIP interactions with coiled-coil arrays. *Science* 300: 2097-2101.
- Chin, K.T., et al. 2005. The liver-enriched transcription factor CREB-H is a growth suppressor protein underexpressed in hepatocellular carcinoma. *Nucleic Acids Res.* 33: 1859-1873.
- Zhang, K., et al. 2006. Endoplasmic reticulum stress activates cleavage of CREBH to induce a systemic inflammatory response. *Cell* 124: 587-599.

## CHROMOSOMAL LOCATION

Genetic locus: CREB3L3 (human) mapping to 19p13.3.

## SOURCE

CREB3L3 (G-11) is a mouse monoclonal antibody raised against amino acids 90-237 mapping within an internal region of CREB3L3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-377156 X, 200 µg/0.1 ml.

CREB3L3 (G-11) is available conjugated to agarose (sc-377156 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377156 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377156 PE), fluorescein (sc-377156 FITC), Alexa Fluor® 488 (sc-377156 AF488), Alexa Fluor® 546 (sc-377156 AF546), Alexa Fluor® 594 (sc-377156 AF594) or Alexa Fluor® 647 (sc-377156 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377156 AF680) or Alexa Fluor® 790 (sc-377156 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

CREB3L3 (G-11) is recommended for detection of CREB3L3 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CREB3L3 siRNA (h): sc-72999, CREB3L3 shRNA Plasmid (h): sc-72999-SH and CREB3L3 shRNA (h) Lentiviral Particles: sc-72999-V.

CREB3L3 (G-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

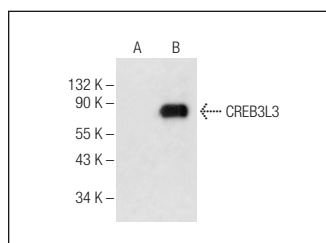
Molecular Weight of CREB3L3: 50 kDa.

Positive Controls: CREB3L3 (h): 293T Lysate: sc-370151.

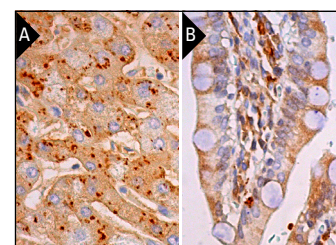
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



CREB3L3 (G-11): sc-377156. Western blot analysis of CREB3L3 expression in non-transfected: sc-117752 (A) and human CREB3L3 transfected: sc-370151 (B) 293T whole cell lysates.



CREB3L3 (G-11): sc-377156. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes and bile duct cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (B).

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

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