Store at -20°C

CHOP Control Cell Extracts

#33263

100 µl
(Controls for 10 western blots)

Support: +1-978-867-2388 (U.S.)
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For Research Use Only. Not For Use In Diagnostic Procedures.

Products Included	Product #	Quantity
CHOP Control Cell Extracts (C2C12 Untreated)	32496	100 µl
CHOP Control Cell Extracts (C2C12 +Thapsigargin)	54854	100 µl

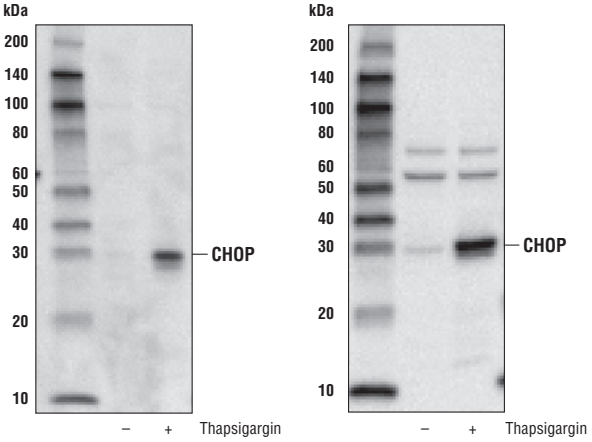
Background: CHOP was identified as a C/EBP-homologous protein that inhibits C/EBP and LAP in a dominant-negative manner (1). CHOP expression is induced by certain cellular stresses including starvation and the induced CHOP suppresses cell cycle progression from G1 to S phase (2). Later it was shown that, during ER stress, the level of CHOP expression is elevated and CHOP functions to mediate programmed cell death (3). Studies also found that CHOP mediates the activation of GADD34 and Ero1-Lα expression during ER stress. GADD34 in turn dephosphorylates phospho-Ser51 of eIF2α thereby stimulating protein synthesis. Ero1-Lα promotes oxidative stress inside the endoplasmic reticulum (ER) (4). The role of CHOP in the programmed cell death of ER-stressed cells is correlated with its role promoting protein synthesis and oxidative stress inside the ER (4).

Description: *CHOP Control Cell Extracts (C2C12 Untreated):* Total cell extracts from C2C12 cells serve as a negative control. Supplied in SDS Sample Buffer.

CHOP Control Cell Extracts (C2C12 +Thapsigargin): Total cell extracts from C2C12 cells treated with thapsigargin (300 nM, 2 hr) serve as a positive control.

This lysate pair is produced as a control for western blotting of CHOP and other ER Stress proteins.

Directions for Use: Boil for 3 minutes prior to use. Load 10 µl of untreated and thapsigargin treated CHOP Control Cell Extracts per lane.



Western blot analysis of CHOP Control Cell Extracts using CHOP (L63F7) Mouse mAb #2895 (left) and CHOP (D46F1) Rabbit mAb (right) #5554.

Storage: Supplied in SDS Sample Buffer: 62.5 mM Tris- HCl (pH 6.8 at 25°C), 2% w/v SDS, 10% glycerol, 50 mM DTT, 0.01% w/v bromophenol blue or phenol red. Store at –20°C, or at –80°C for long-term storage.

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

Background References:

(1) Ron, D. and Habener, J.F. (1992) *Genes Dev* 6, 439-53.

(2) Barone, M.V. et al. (1994) *Genes Dev* 8, 453-64.

(3) Zinszner, H. et al. (1998) *Genes Dev* 12, 982-95.

(4) Marciniak, S.J. et al. (2004) *Genes Dev* 18, 3066-77.

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www.cellsignal.com

Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.