

CHOP (L63F7) Mouse mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-IC, FC-FP, ChIP	H M R	Endogenous	27	Mouse IgG2a	#P35638	1649

Product Usage Information

For optimal ChIP results, use 2.5 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (Immunocytochemistry)	1:400 - 1:1600
Flow Cytometry (Fixed/Permeabilized)	1:250 - 1:1000
Chromatin IP	1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #78063.

Specificity/Sensitivity

CHOP (L63F7) Mouse mAb detects endogenous levels of total CHOP protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human CHOP protein.

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- α expression during ER stress. GADD34 in turn dephosphorylates phospho-Ser51 of eIF2 α thereby stimulating protein synthesis. Ero1- α 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).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized) **ChIP:** Chromatin IP

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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