

Calreticulin (D3E6) XP® Rabbit mAb



- ☐ Small 100 µl
(10 western blots)
- ☐ Petite 40 µl
(4 western blots)

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For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #811
Swiss-Prot Acc. #P27797

Applications W, IF-IC Endogenous	Species Cross-Reactivity* H, M, R	Molecular Wt. 55 kDa	Isotype Rabbit IgG**
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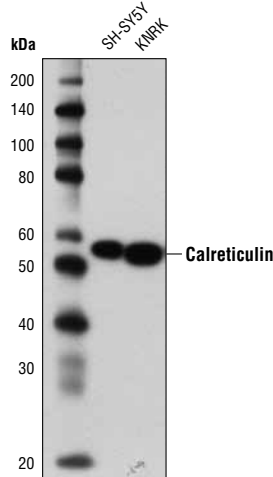
Background: Calcium is a universal signaling molecule involved in many cellular functions such as cell motility, metabolism, protein modification, protein folding, and apoptosis. Calcium is stored in the endoplasmic reticulum (ER), where it is buffered by calcium binding chaperones such as calnexin and calreticulin, and is released via the IP₃ Receptor channel (1). Calreticulin also functions as an ER chaperone that ensures proper folding and quality control of newly synthesized glycoproteins. As such, calreticulin presumably does not alter protein folding but regulates proper timing for efficient folding and subunit assembly. Furthermore, calreticulin retains proteins in non-native conformation within the ER and targets them for degradation (2,3).

Specificity/Sensitivity: Calreticulin (D3E6) XP® Rabbit mAb recognizes endogenous levels of total calreticulin protein.

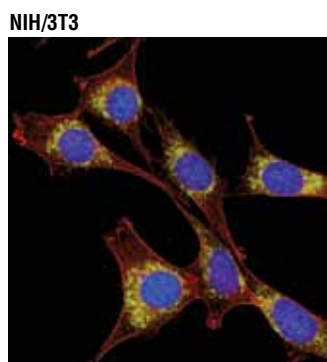
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human calreticulin protein.

Background References:

- (1) Groenendyk, J. et al. (2004) *Mol Cells* 17, 383-9.
- (2) Nauseef, W.M. et al. (1995) *J Biol Chem* 270, 4741-7.
- (3) Williams, D.B. (2006) *J Cell Sci* 119, 615-23.



Western blot analysis of extracts from SH-SY5Y and KNRK cells using Calreticulin (D3E6) XP® Rabbit mAb.



Confocal immunofluorescent analysis of NIH/3T3 cells using Calreticulin (D3E6) XP® Rabbit mAb (green) and β-Actin (13E5) Rabbit mAb (Alexa Fluor® 555 Conjugate) #8046 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

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.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting 1:1000
 Immunofluorescence (IF-IC) 1:200
 IF Protocol: Methanol Permeabilization required

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: 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.

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