# Product Data Sheet

## Purified anti-CHOP

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| **Catalog # / Size:** | 5343505 / 25 µg<br>5343510 / 100 µg |
| **Clone:** | 9C8/CHOP |
| **Isotype:** | Mouse IgG2b, κ |
| **Immunogen:** | Partial recombinant human CHOP protein |
| **Reactivity:** | Human, Mouse |
| **Preparation:** | The antibody was purified by affinity chromatography. |
| **Formulation:** | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide |
| **Concentration:** | 0.5 mg/mL |



ICC staining of purified anti-CHOP antibody (clone 9C8/CHOP) on untreated (panel A) and tunicamycin treated (2.0 µg/mL, 8 hours) (panel B) HeLa cells cells. The cells were fixed with 4% PFA and permeabilized with Triton X-100, and blocked with 5% FBS for 1 hour at room temperature. The cells were then stained with 5.0 µg/mL of the primary antibody, followed by incubation with 2.5 µg/mL of Alexa Fluor® 594 goat anti-mouse IgG antibody (Cat. No. 405326) for 1 hour at room temperature. Nuclei were counterstained with DAPI, and the image was captured with a 60X objective.



HeLa cells treated with 2.0 µg/mL tunicamycin for 8 hours (filled histogram) and untreated HeLa cells (open histogram) were fixed and permeabilized using the Cyto-Fast™ Fix/Perm Buffer Set (Cat. No. 426803), and intracellularly stained with purified anti-

## Applications:

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| **Applications:** | Intracellular Staining for Flow Cytometry, Immunocytochemistry |
| **Recommended Usage:** | Each lot of this antibody is quality control tested by western blotting. For western blotting, the suggested use of this reagent is 2.5 - 1.0 µg/mL. For immunocytochemistry, a concentration 5.0 µg/mL is recommended. For flow cytometric staining, the suggested use of this reagent is ≤ 0.5 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. |
| **Application Notes:** | This clone failed to detect CHOP in human small intestine.<br><br>For ICC testing, we do not recommend methanol only as a fixation-permeabilization step due to poor CHOP staining. We recommend 4% PFA fixation with either Triton X-100 or methanol pe |

**Description:** When unfolded proteins accumulate in the ER lumen, multiple unfolded protein response (UPR) pathways become activated, including PERK, ATF6, and IRE1α, all of which transcriptionally reprogram the flux of proteins through the ER. When these quality control mechanisms fail to restore ER homeostasis, sustained stress results in the induction of CHOP, a pro-apoptotic transcription factor that negatively regulates expression of BCL2 and increases expression of BIM and TNFS10RB. One mechanism cancer cells exploit to adapt to harsh conditions of the tumor microenvironment is through upregulation of UPR pathways. Thus, understanding the molecular mechanisms that govern the switch from adaptation to apoptosis is of great therapeutic interest.

**Antigen References:**

1. Yamaguchi, *et al.* 2004. *J. Biol. Chem.* 279: 45495
2. Oyadomari, *et al.* 2004. *Cell Death Differ.* 11:381.
3. Puthalakath H, *et al.* 2007. *Cell.* 129: 1337.