Lamin A/C (4C11) Mouse mAb

Applications Species Cross-Reactivity* Molecular Wt. Isotype
W, IP, IHC-P, IF-IC, IF-F, F Endogenous H, M, R, Mk 74 kDa (Lamin A) 63 kDa (Lamin C) Mouse IgG2a/k

Background: Lamins are nuclear membrane structural components that are important in maintaining normal cell functions such as cell cycle control, DNA replication and chromatin organization (1-3). Lamin A/C is cleaved by caspase-6 and serves as a marker for caspase-6 activation. During apoptosis, lamin A/C is specifically cleaved into a large (41-50 kDa) and a small (28 kDa) fragment (3,4). The cleavage of lamins results in nuclear disregulation and cell death (5,6).

Specificity/Sensitivity: Lamin A/C (4C11) Mouse mAb detects endogenous levels of lamin A and lamin C proteins. It also reacts with the larger fragments of lamin A (50 kDa) and lamin C (41 kDa) produced by caspase cleavage during apoptosis. This antibody does not cross-react with lamins B1 and B2.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a recombinant fragment of human lamin A protein.

Background References:

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-mouse secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:
Western blotting 1:2000
Immunoprecipitation 1:50
Immunohistochemistry (Paraflin) 1:200†

†Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.

Recommended Antibody Dilutions:
Immunofluorescence (IF-IC) 1:200
Immunofluorescence (IF-F) 1:100
Flow Cytometry 1:200

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.
Western blot analysis of extracts from THP-1 cells, untreated or treated with cycloheximide (CHX, 10 μg/ml, overnight) followed by TNF-α #8902 (20 ng/ml, 4 hours), using Lamin A/C (4C11) Mouse mAb.

Flow cytometric analysis of HeLa cells (green) using Lamin A/C (4C11) Mouse mAb (solid lines) or a concentration matched Mouse (G3A1) mAb IgG Isotype Control #5415 (dashed lines). Anti-mouse IgG (H+L), F(ab')2 Fragment (Alexa Fluor® 488 Conjugate) #4408 was used as a secondary antibody.

Confocal immunofluorescent analysis of HeLa cells using Lamin A/C (4C11) Mouse mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red).

Immunohistochemical analysis of paraffin-embedded human colon carcinoma using Lamin A/C (4C11) Mouse mAb.