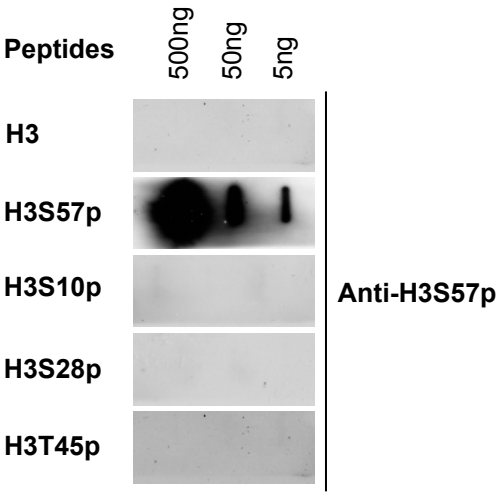
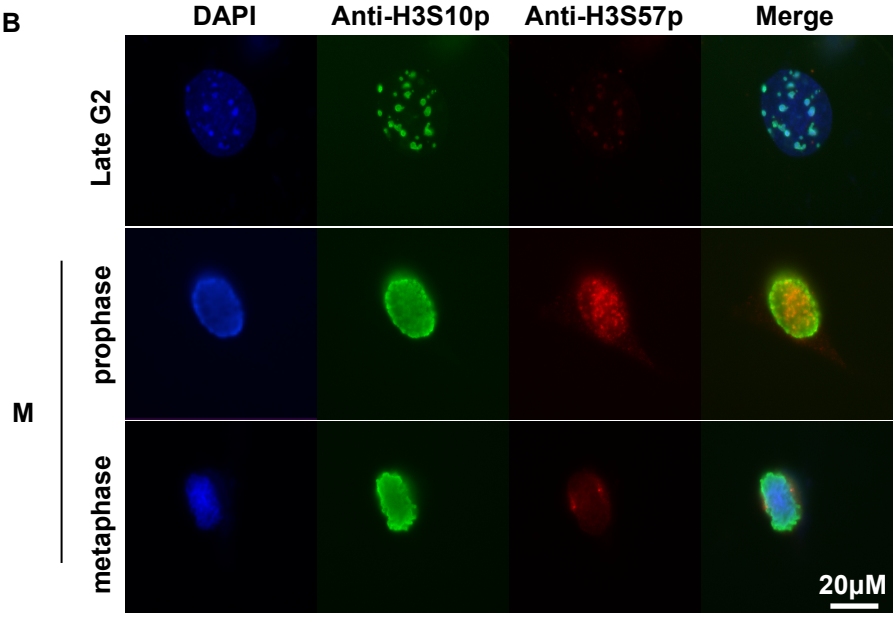
A


Peptides
500ng
50ng
5ng
H3
H3S57p
H3S10p
H3S28p
H3T45p
Anti-H3S57p

B


DAPI
Anti-H3S10p
Anti-H3S57p
Merge
Late G2
M
prophase
metaphase
20μM

C

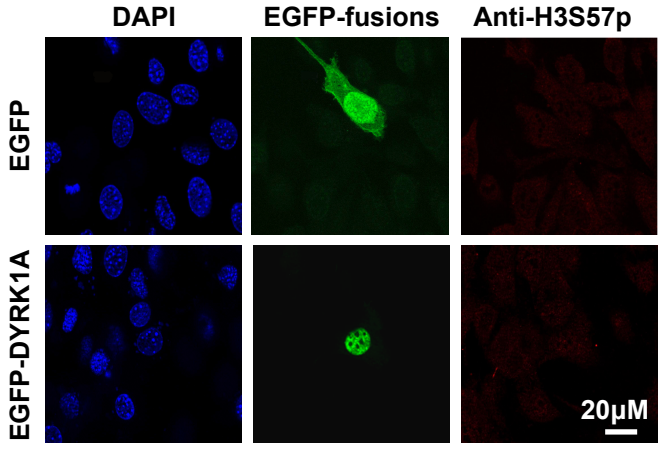

DAPI
EGFP-fusions
Anti-H3S57p
EGFP
EGFP-DYRK1A
20μM

Fig S1 Characterization of the anti-H3S57p antibody. (**A**) Slot blot highlighting the specificity of the anti-H3pS57 antibody, performed with 5, 50, and 500ng of H3 peptides bearing the indicated post-translational modifications. (**B**) NIH3T3 cells were fixed and labeled with the indicated antibodies and the DNA was stained with DAPI. The phase of the cell cycle was determined based on the degree of chromosome condensation and levels of Histone H3S10 phosphorylation. (**C**) NIH3T3 cells were transfected with expression vectors for either EGFP, or EGFP-DYRK1A or EGFP-DYRK1A(K188R) fusion proteins. After 48 h, cells were fixed and indirectly labeled with the indicated antibodies. DNA was stained with DAPI.