

Table S1. Colocalization of epigenetic marks with POLII-Ser2-*P*

H3 mark	% Colocalized with POLII-Ser2- <i>P</i>
K4-Me ₃	23 ± 4
K36-Me ₃	24 ± 3
K27-Me ₃	13 ± 2

Indicated histone signal foci were scored for % colocalization with POLII-Ser2-*P* in two-color immunostained ESCs.