**Supplementary methods**

*Plasmid constructs*

The following plasmids were used in mammalian cell transfections. pG5-E1B-Luc contains five GAL4 DNA binding sites cloned upstream of a minimal E1B promoter element and the firefly luciferase gene, pEGR-1-Luc (kindly provided by Ian Stratford) contains the egr-1 promoter element and the firefly luciferase gene and pCH110 were previously described (Yang et al., 2004). pAS1561 [pCMV-GAL-Elk(1-428)], pAS2058 [pCMV-GAL-Elk(1-428)K2R], pAS1559 [pCMV-GAL-Elk(1-206)], pAS571 [pCMV-GAL-Elk(205-428)], pAS1561 [pCMV-GAL-Elk(205-260)], pAS1563 [pCMV-GAL-Elk(205-375)], pAS1562 [pCMV-GAL-Elk(205-347)], pAS1567 [pCMV-GAL-Elk(205-399)], pAS1557 [pCMV-GAL-Elk(260-428)], pAS2062 [pCMV-GAL-SUMO-Elk(260-428)], pAS1553 [pCMV-GAL-Elk(223-428)], pAS2065 [pcDNA3-GAL-SAP-1(234-431)], pGAL-VP16 (kindly provided by S. Roberts), pVR-p300, pVRp300Δ831–1046, pGAL-p300, pGAL-p300ΔR (kindly provided by N.D. Perkins), pcDNA3-HA-SUMO-1 and pcDNA3-Ubc9(C93S) [DN-ubc9] (kindly provided by R. Hay) were described previously (Yang et al., 2003 and 2004). pFlag-ARIP3(1-572) (PIASxα), pFlag-ARIP3(103-572), pFlag-ARIP3(Δ467-487), pFlag-ARIP3(W383A) and pFlag-MIZ-1(PIASxβ) (kindly provided by J. Palvimo), were described previously (Kotaja et al., 2002). pFlag-PIASxα(304-572) (pAS2084) was constructed by inserting a EcoRI/XbaI-cleaved PCR product into the same sites in pFlag-PIASxα. pSG5-myc-PIAS1 and pSG5-myc-PIASy were kindly provided by F. Fuller-Pace. pcDNA-HDAC-1, 2, 3, 4 and 6 were kindly provided by T. Kouzarides. pAS2079 [pcDNA3-Elk-1 K2R] was constructed by ligating an EcoRI/XhoI fragment from pAS2051 [pBElk-1, K230R/K249R] into the same sites of pAS1693 [pcDNA3-Elk-1]. pAS2080 [pCMV-GAL-Elk(223-428)V365A,L366A],

pAS2081 [pCMV-GAL-Elk(223-428)I376A, H377A], pAS2082 [pCMV-GAL-Elk(223-428)F378A,W379A] and pAS2083 [pCMV-GAL-Elk(223-428)V412A,D413A] were constructed by ligating SalI/XbaI PCR fragments into the same sites of pAS571 [pCMV-GAL].

*Primers*

The following primer-pairs were used for RT-PCR experiments. *mcl-1*: 5'-CCAGCTCCTACTCCAGCAAC-3' and 5'-TCGTAAGGACAAAACGGGAC-3'; *c-fos:* 5'-AGAATCCGAAGGGAAAGGAA-3' and 5'-CTTCTCCTTCAGCAGGTTGG-3'; *srf:* 5'-ACGACCTTCAGCAAGAGGAA-3' and 5'-AAGCCAGTGGCACTCATTCT-3'; *18S rRNA:* 5'-GGACATCTAAGGGCATCACAG-3' and 5'-TCAAGAACGAAAGTCGGAGGTT-3'; *A20*; 5'-ATGCACCGATACACACTGGA-3' and 5'-GCGTGTGTCTGTTTCCTTGA-3'.

The following primer-pairs were used for ChIP experiments. *c-fos*: 5'-GAGCAGTTCCCGTCAATCC-3' and 5'-GCATTTCGCAGTTCCTGTCT-3'; *srf* intron 3: 5'-TCAGGCCAAGTATCCACTC-3' and 5'-GCCACAGGGCAGTAGATGTT-3'.