

Supplementary Figure 1. Patterns of SAYP and STAT on polytene chromosomes.

Staining of polytene chromosomes with antibodies against SAYP and STAT and a merged image are shown. DAPI staining is also given. Staining (A) before and (B) after PV treatment is shown.

Supplementary Figure 2. The effect of PV treatment on S2 cells.

The level of mRNA of genes encoding transcription factors and housekeeping genes after PV treatment (*actin* mRNA was taken as reference).

Supplementary Figure 3. The effect of SAYP content in S2 cells.

The levels of indicated mRNAs were measured in normal S2 cells and in cells with SAYP overexpression and SAYP knockdown and normalized with reference to *actin* mRNA. The activity of each gene in S2 cells was taken as 1.

Supplementary Figure 4. Activation of STAT-dependent genes by PV in S2 cells.

The levels of expression of the indicated genes were normalized with reference to *actin* mRNA, and the activity of each gene in S2 cells was taken as 1. PV activation was performed with normal S2 cells and in cells with SAYP overexpression and knockdown.

Supplementary Figure 5. The effect of SAYP knockdown on the occupancy of a housekeeping gene promoter.

The levels of different factors on the *actin* gene promoter in normal cells and cells with SAYP knockdown were determined by ChIP. The results are presented as the percentage of input, with gray staining showing the levels of the factors on rDNA.

Supplementary Materials

Primers used in ChIP-qPCR:

SOCS36E second promoter (17), 5'-GGAATGGGAAATCGTACACTTAGTTTAC and 5'-CGGCGGGATCTTCTATTAGTCC;

dm promoter, 5'-AAAGAGAGCAGCAGTGAGCAT and 5'-ATCCACAAAGCGATTCTCTGAATTACC;

buffy promoter, 5'-GTTGCCACAGCCATTTAGGGGATACA and 5'-GTCTGAAGGCTGAAAATGAATTGAACCG;

eve promoter, 5'-GCCGCTCAGCACCGAGAGC and 5'-ATACCGCTGCGCTCTGCAGG;

dpp promoter, 5'-AAAAGGAGGCGACGTCGCTGC and 5'-CGGTGTGTCTCTGAGCGTGTG;

apontic promoter, 5'-GCCGCTGGCAGAGCAGAATG and 5'-GGAAGAACGCCGGATGAAAGCC;

hsp70 promoter, 5'-ACATACTGCTCTCGTTGGTTCG and 5'-TTGAATTGAATTGTCGCTCCGTAG;

actin promoter, 5'-ACAATCCAATGCCAACTGACCAAC and 5'-AGAGAGACAGCGAGTGACACAATC.

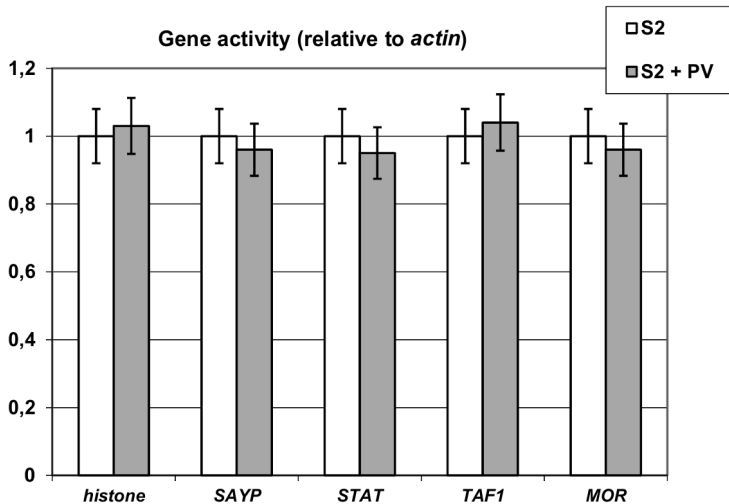
Primers used for analysis of gene expression:

SOCS36E, 5'-TTTCTGGGTTCTGTTTGCCCTCCG and 5'-GTCGGATGTCGGCCAATCTGAATTGC;

dm, 5'-CGCTGCAGCTGAAGCAACGTC and 5'-GGGTTATCCTAGCCCTACGCCG;
slbo, 5'-CACGCCAGCCCTGCTTGAC and 5'-TTGGTTGATTTCTGGGAGGCTTTCC;
buffy, 5'-GTGAGCTTGCTTTTGGGAGCCG and 5'-CCTTGGCGTACACAATCAACGGAC;
eve, 5'-TCCCCCAAAGATTGTACAAACTA and 5'-
TTTATTTCTTAATTTGATTTTGCGCCTTA;
dpp, 5'-CAAAACGAATGCCCTATAAATATATG and 5'-
CTCGTTTCTATTAATTTATCCAACAT;
apontic, 5'-GCCGCCAACTCGGCTTCAG and 5'-
AGTGTAGCTGAAACATTTGCTTGTTTTG;
debcl, 5'-CCCCGGGTCGGCGAATTTACG and 5'-CAATGCGCCGACACACGTTTTG;
DIAP1, 5'-CGCATCACATCGGTGAAGGGC and 5'-GGCGCCGAGTACAATACGGC;
actin, 5'-GGCACCACACCTTCTACAATGAGC and 5'-GAGGCGTACAGCGAGAGCACAG;
histone H1, 5'-CCAGCGACAGTTGAGAAGAAAG and 5'-
TTGATTGCCAGAAGTGATGAACC;
hop, 5'-TAAGTCGAACCCGCCTAATCTACG and 5'-TGTATAGTGGCTTGTATAGCTTGT;
stat, 5'-GCAAACAAAACCTTCCACTACGATGCATTCC and 5'-
GAAGTCCGACGATGACGATTCCGCC;
e(y)3 (SAYP), 5'-CGGCGGAGCTATGCCTATTGG and 5'-
GGAACGGAGTCACCGAGGACG;
CG11400, 5'-ACATTTGCCAGCAGGTTGTAG and 5'-CGGCTCTGTCTCAGTTTTCTG;
moira, 5'-AAGACCAACACAAACACAGACTC and 5'-
CTGACTTGATGGCTGACTTATCG;
TAF1, 5'-GAAGACGATGGTTCTCGAGTGCGT and 5'-
GAATCCACCATGTATATCTGCG;
PCNA, 5'-GCAGTTCAGCGAATCCGTTGTG and 5'-GAAGGCGTTCAGGTAGCGACAG.

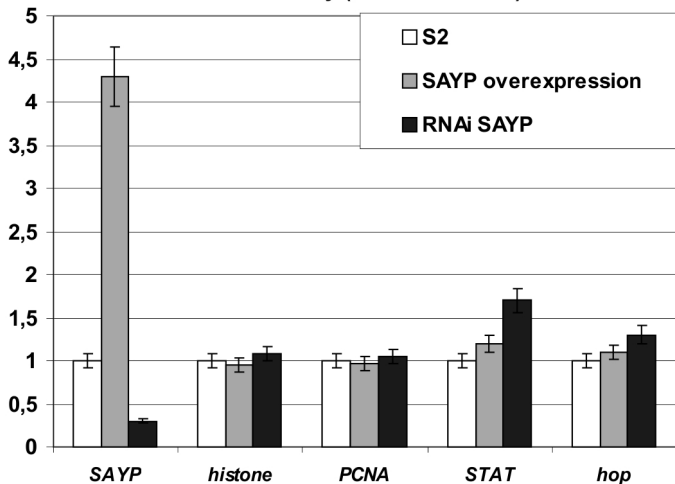
Suppl Figure 2

Gene activity (relative to *actin*)

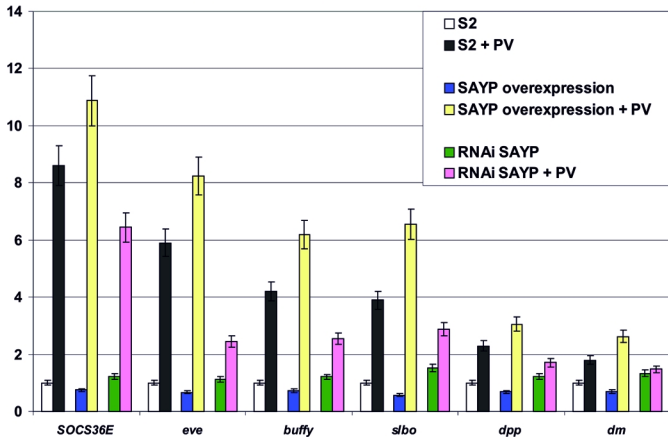


Suppl Figure 3

Gene activity (relative to *actin*)



Gene activity (relative to actin)



Suppl Figure 5

actin promoter

