Supplementary figure/table and legends
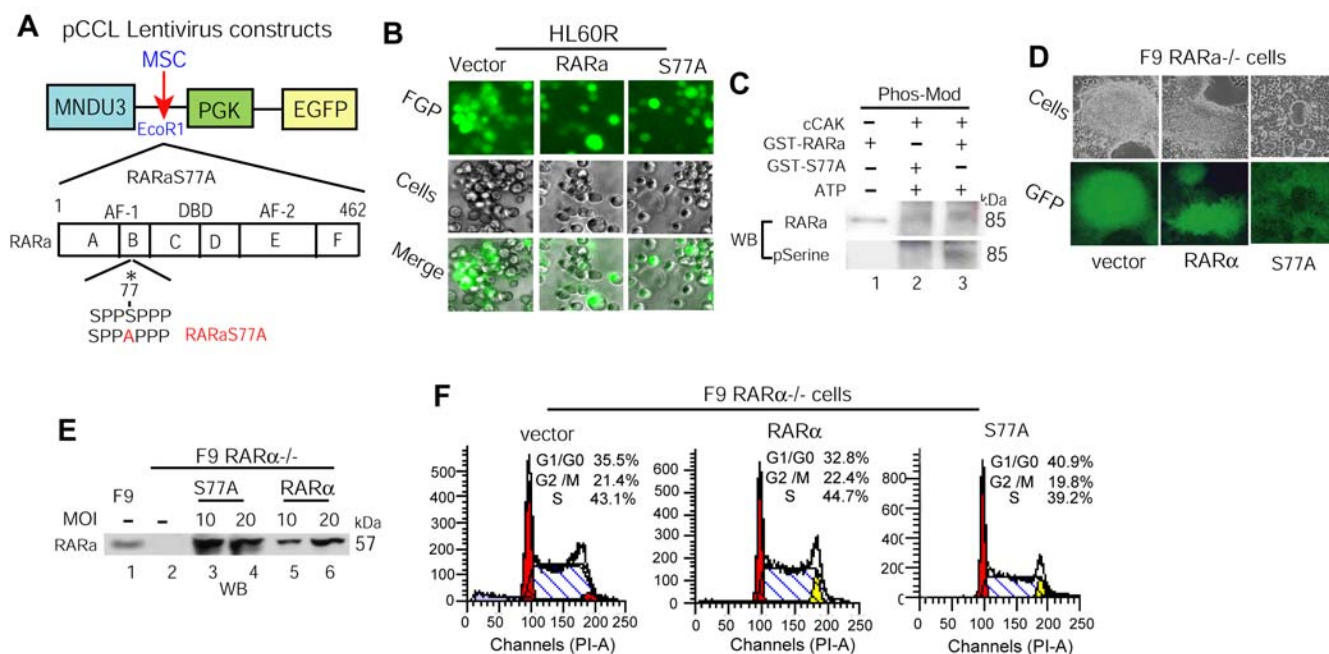
Supplementary Figure 1

Genes	Primers	Fragment (bp)	Location*	Accession #
mRARβ	5'-aatcctgggagttggtgatg- 3' 5'-cggagcagctcacttcctac- 3'	145	7-152	X56573
hRARβ	5'-aatcctgggagttggtgatg- 3' 5'-gaagtgagctgttcagaggc- 3'	149	730-879	X56849
hp21^{CIP1}	5'-gcaaatgtttcaggcacaga- 3' 5'-ccctcatttgcagatggttt- 3'	178	3343-3521	U24170

* Sequence location 1 refers to the first base pair of the published sequence in National Cancer for Biotechnology Information (NCBI) database.

Supplementary Table 1

The legends of the supplementary figure/table

S-Fig. 1. RARαS77A resists phosphorylation by CAK and decreased RARαS77 phosphorylation is a downstream event of decreased CAK activity. **A,** *RARαS77A* (*S77A*) or *RARα* cDNA was cloned into the lentiviral vector. **B,** Transduction efficiency of *S77A* and *RARα* in HL60R cells was > 90%. **C,** CAK complexes immunuprecipitated from F9 cells were incubated with GST-RARα or GST-S77A in an *in vitro* kinase reaction in the presence of unlabeled ATP. The reaction mixtures were then subjected to WB analysis using anti-RARα and anti-serine antibodies as indicated. **D,** Transduction efficiency of *S77A* or *RARα* in F9 RARα-/- cells was > 90%. **E,** WB depiction of S77A and RARα levels in transduced F9 RARα-/- cells by using anti-RARα antibodies. **F,** FACS analysis of cell cycle profile of F9 RARα-/- cells expressing S77A or RARα.

S-Table 1. Primers used for PCR amplification in ChIP assays.