Supplementary methods

AUF1 phosphorylation assay

To detect whether AUF1 protein phosphorylated after PGE2 treatment, whole cell lysates were isolated from PGE2- and ethanol-treated cells and subjected for Western blot analysis using the following antibodies: mouse anti-phospho-threonine and anti-phospho-tyrosine (Cell Signaling Technology, MA, USA), and rabbit anti-phospho-serine (Abcam, Cambridge, UK).

Supplementary Table 1. ARE-containing FGFs family genes

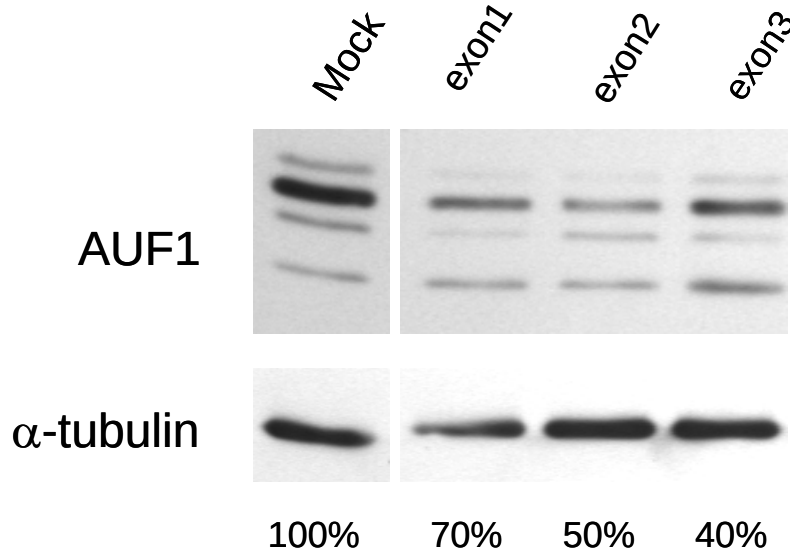
Accession number	Gene name	Gene Symbol	Class [a]	Cluster [b]	Chromosome
NM_033649	Fibroblast growth factor 18	FGF18	1	Cluster 5	5
AF110400	Fibroblast growth factor 19	FGF19	1	Cluster 5	11
NM_002006	Fibroblast growth factor 2 (basic)	FGF2	1	Cluster 5	4
BC018404	Fibroblast growth factor 21	FGF21	2	Cluster 3	19
AB047858	Fibroblast growth factor 23	FGF23	2	Cluster 2	12
NM_002007	Fibroblast growth factor 4	FGF4	2	Cluster 4	11
AF171928	Fibroblast growth factor 5	FGF5	1	Cluster 5	4
M60828	Fibroblast growth factor 7	FGF7	2	Cluster 4	15
NM_002010	Fibroblast growth factor 9	FGF9	2	Cluster 4	13

[a] ARE classification according to Chen et al. (1)

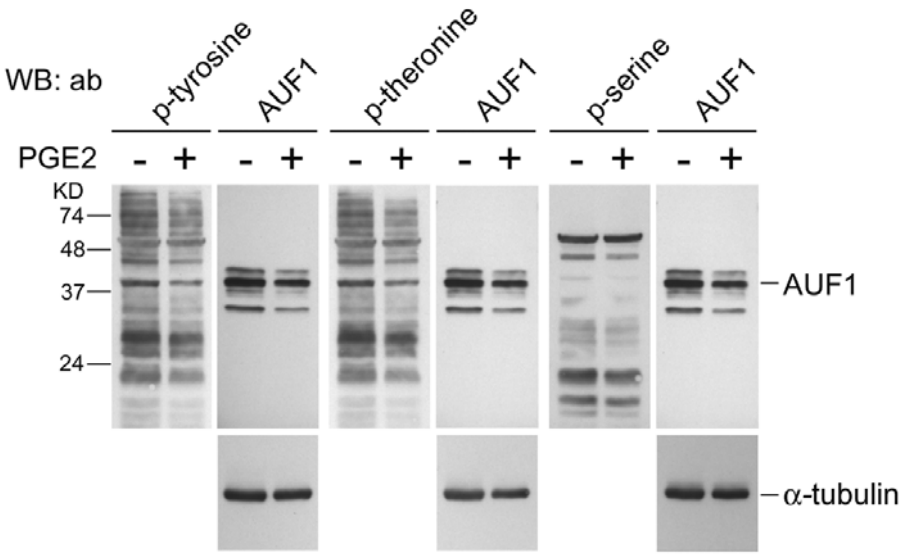
[b] The ARED cluster assigned to the gene (2).

Reference

1. Chen, C.Y. and Shyu, A.B. (1995) AU-rich elements: characterization and importance in mRNA degradation. *Trends Biochem Sci*, **20**, 465-470.
2. Bakheet, T., Williams, B.R. and Khabar, K.S. (2006) ARED 3.0: the large and diverse AU-rich transcriptome. *Nucleic Acids Res*, **34**, D111-114.



Supplementary Figure 1. AUF1-specific siRNA knocks down AUF1 expression in HEK293 cells. The commercial RNAi reagents included 3 different siRNAs that target exons 1 to 3. Compare to the Mock control, the overall knockdown effects of 3 siRNAs are 70%, 50%, and 40% in exon1-, exon2-, and exon3-specific siRNA. The exon1-specific siRNA gave the best knockdown effect and was used in the experiments thereafter.



Supplementary Figure 2. PGE_2 treatment has no effect on AUF1 protein phosphorylation. Human primary endometrial stromal cells were treated with PGE_2 or EtOH control. Total cell lysates were isolated and subjected to the detection of phosphorylation level using various phosphorylation-specific antibodies. While AUF1 protein showed no phosphorylated serine residues, levels of phosphorylated tyrosine or theronine were no different between PGE_2- or EtOH-treated cells.