Supplemental Figure 2: Identification of ERE, AP-1 and estrogen related receptor (ERR) binding sites (ERRBS) sites in the \textit{Nrf1} genomic locus. We compared the mouse \textit{Nrf1} (gene: OTTMUSG00000014351, Gene Location: Chr6:29997988-30103458(+)) and human \textit{NRF1} (gene: OTTHUMG00000143736, Gene Location: Chr7:129251554-129396921(+)) gene promoters (Fig. 2A). The promoters were searched for EREs, for AP-1 sites, because AP-1 interacted directly with 4-OHT-ER\textsubscript{β} on the \textit{NRF1} promoter to increase \textit{NRF1} transcription in MCF-7 cells; and for ERRBS because of ERRs’ roles in regulating mitochondrial gene expression. Analysis of the proximal 1.2 kb of the mouse \textit{Nrf1} promoter and exon/intron areas before the start codon identified a potential ERE in the promoter area (-962), as well as AP-1, 1/2 ERE, and ERRBS in intron area before the start codon (Fig. 2A). The human \textit{NRF1} region -944 and mouse \textit{Nrf1} region -962 contain an ERE that differ by 2 nucleotides in each arm of the palindrome and the mouse ERE has a perfect 5’-ERE half site(Fig. 2A), findings that predict higher ER\textsubscript{α} binding affinity for the mouse \textit{Nrf1} ERE. However, the human NRF1 region also contains an AP-1 binding site 59 nt upstream of the ERE and ½ ERE (Fig 2A). The mouse \textit{Nrf1} promoter contains ERRBS, AP-1, and ½ ERE sites in the intron 3 region close to the protein start codon not seen in the human \textit{NRF1} promoter at a comparable location.