



**Figure S7.** Confirmation of PBM-derived motifs by EMSAs for three newly characterized proteins (Zfp740, Osr2, Sp100) and one recently characterized protein (Zfp161, also known as ZF5 (Orlov *et al.*, *FEBS J*, 2007)). Electrophoretic mobility shift assays were performed to verify select motifs which were determined by PBM. Lane 1: Zfp740 protein + C<sub>8</sub> probe; lane 2: Zfp740 protein + (GC)<sub>5</sub> probe; lane 3: Zfp740 protein + (GGCC)<sub>2</sub> probe; lane 4: Zfp161 protein + C<sub>8</sub> probe; lane 5: Zfp161 protein + (GC)<sub>5</sub> probe; lane 6: Zfp161 protein + (GGCC)<sub>2</sub> probe; lane 7: Osr2 positive probe; lane 8: Osr2 protein + Osr2 positive probe; lane 9: Osr2 protein + Sp100 positive probe; lane 10: Sp100 positive probe; lane 11: Sp100 protein + Sp100 positive probe; lane 12: Sp100 protein + Osr2 positive probe. Lanes 1-6 were designed to examine the specificity of the protein to its PBM-derived motif by testing each protein with two other probe sequences of similar GC content (Zfp740 positive control probe containing C<sub>8</sub>, Zfp161 positive control probe containing (GC)<sub>5</sub>, or probe containing (GGCC)<sub>2</sub>); see **Materials and Methods** for the complete probe sequences. Lanes 7-12 validate binding by testing the protein both to its PBM-derived motif and to a probe designed to test a different protein, as a negative control.