

The role of WDR5 in silencing human fetal globin gene expression

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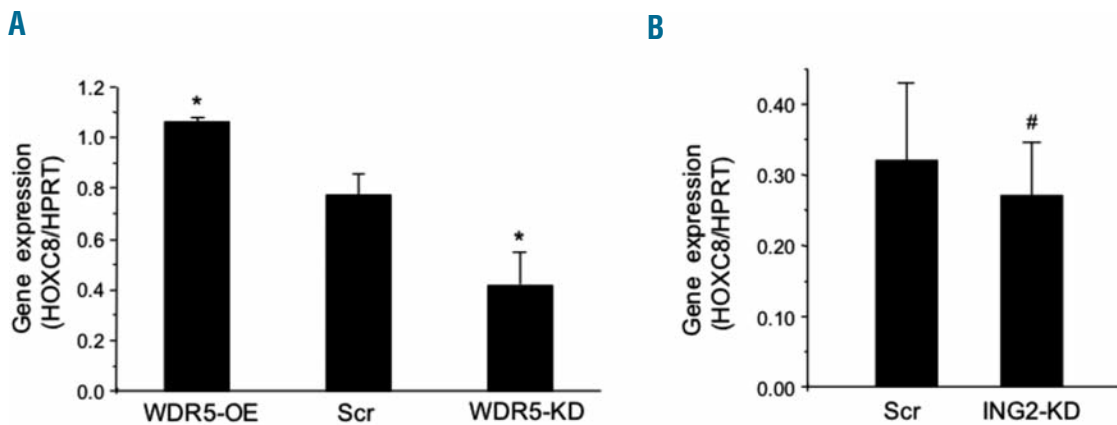
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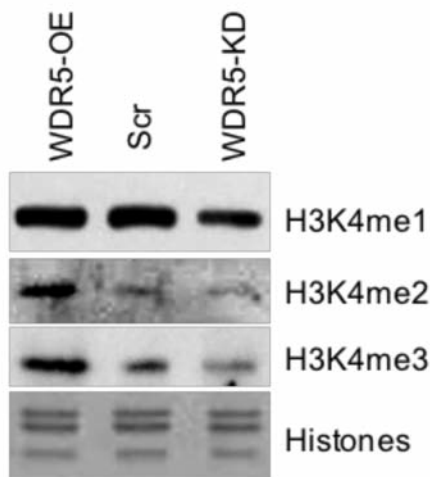
ChIP primer sequences

Locus	5' Primer	3' Primer
HS4	AAGGGGTGGACTCCAGAGAC	CTCCTGACTTTCGTCTAGT
HS3	TATGTATGGGTCAGTGGTCT	CCCTGCTTAGGAGCTTAATC
HS2	AAGCATGAGCAGTTCTGGCCAG	TATGATGCCGTTTGAGGTGGAG
HS1	CATGCAGGACTCTCAAACACTAAC	TCAACAGAGATGGGCAAACCC
ε-pro	TTTAAAGTACCATGGAGAACAGG	ATGAAATGACACCATATCAGATAC
γ-pro	ATCCAGTGAGGCCAGGGGC	GAGATTGACAAGAACAGTTTGAC
G/Αγ	ATCAGCGTGCATGTCTCAG	CATGAGCTCCTCTAAACCTG
β-pro	TGCTTACCAAGCTGTGATCC	AACGGCAGACTTCTCCTCAGG
3'-HS	TCACTGAAGTAGGGAGGGAAGAA	AAGGTCATTCCTTAATGGTCTTTTC
OR51B4	AACAGTGCTGGCCCTTCT	TCCAAATGAGGACAAGAAGAGTG
-pro		

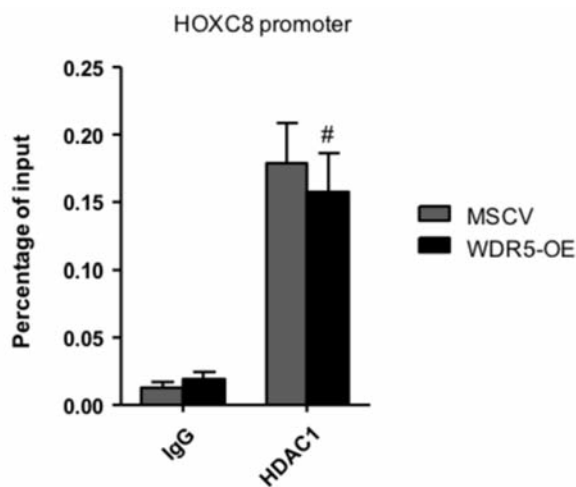
Online Supplementary Figure S1. ChIP primer sequences.



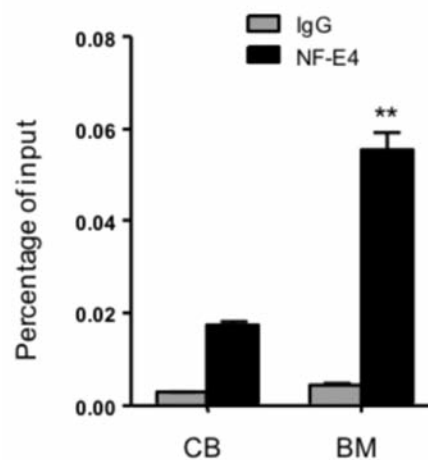
Online Supplementary Figure S2. *HOXC8* gene expression in K562 cells over-expressing WDR5 or ING2. (A) *HOXC8* gene expression analysis by Q-RT-PCR of RNA from WDR5 overexpression (WDR5-OE), knock-down (WDR5-KD), and scrambled control (Scr) K562 cells. (B) *HOXC8* gene expression analysis by Q-RT-PCR of RNA from ING2 knock-down (ING2-KD) and scrambled control (Scr) K562 cells. Results are shown as mean ± SD from 3 independent experiments. #*P*>0.05, **P*<0.05 compared to the scrambled control.



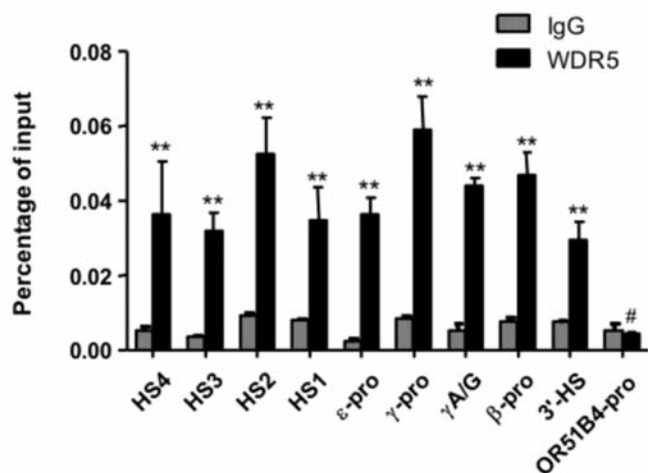
Online Supplementary Figure S3. Western blot analysis of histone H3. Western blot analysis of histones from WDR5-OE, WDR5-KD, or scrambled control cells (Scr) with indicated antibodies. Bottom panel shows Coomassie staining of purified histones.



Online Supplementary Figure S4. HDAC1 ChIP analyses at HOXC8 promoter from WDR5 overexpressing or vector control K562 cells. Results are shown as mean \pm SD from 3 independent experiments. # $P > 0.05$ compared to the vector control.



Online Supplementary Figure S5. NF-E4 ChIP analysis at the γ -promoter in erythroid progenitor cells from cord blood (CB) and adult bone marrow (BM). Results are shown as mean \pm SD from 3 independent experiments. ** $P < 0.01$ compared to CB.



Online Supplementary Figure S6. Localization of WDR5 across the β -globin locus measured by ChIP in chromatin fractions from erythroid progenitors from cord blood. The precipitated DNA was amplified with primers specific for the indicated regions of the β -globin locus. HS: hypersensitive site; pro: promoter; γ /A γ : intergenic region between G γ - and A γ -globin genes; OR51B4: Olfactory receptor 51B4 gene. Results are shown as mean \pm SD from 3 independent experiments. # $P > 0.05$ compared to the IgG control, ** $P < 0.01$ compared to OR51B4-pro.