SUPPLEMENTAL MATERIAL

Guiu et al., http://www.jem.org/cgi/content/full/jem.20131857/DC1
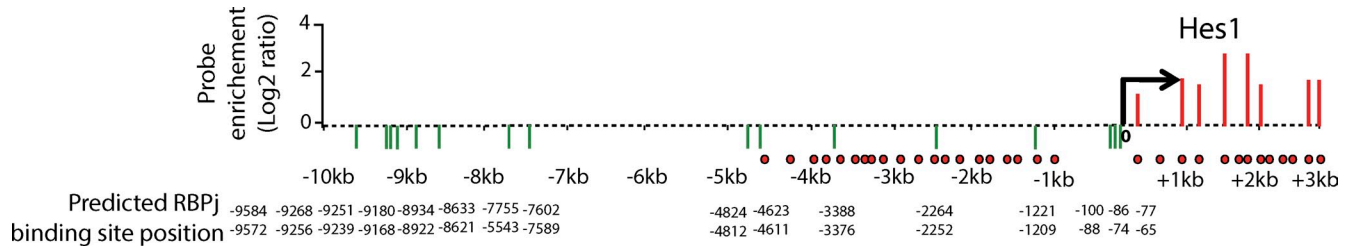

Figure S1. Hes1 predicted RBPj–binding sites. This figure is related to Fig. 2. (A) Schematic representation of the promoter region of *Cdca7* showing the array probe position (red circles), DNA (black dashed line), TSS (black arrow), putative RBPj-binding site (green bars), and probe enrichment in $\log_2$ ratio (red bars). RBPj-binding sites were identified with the Genomatix and STORM software scanning from the -10- to 0-kb region of each target gene.
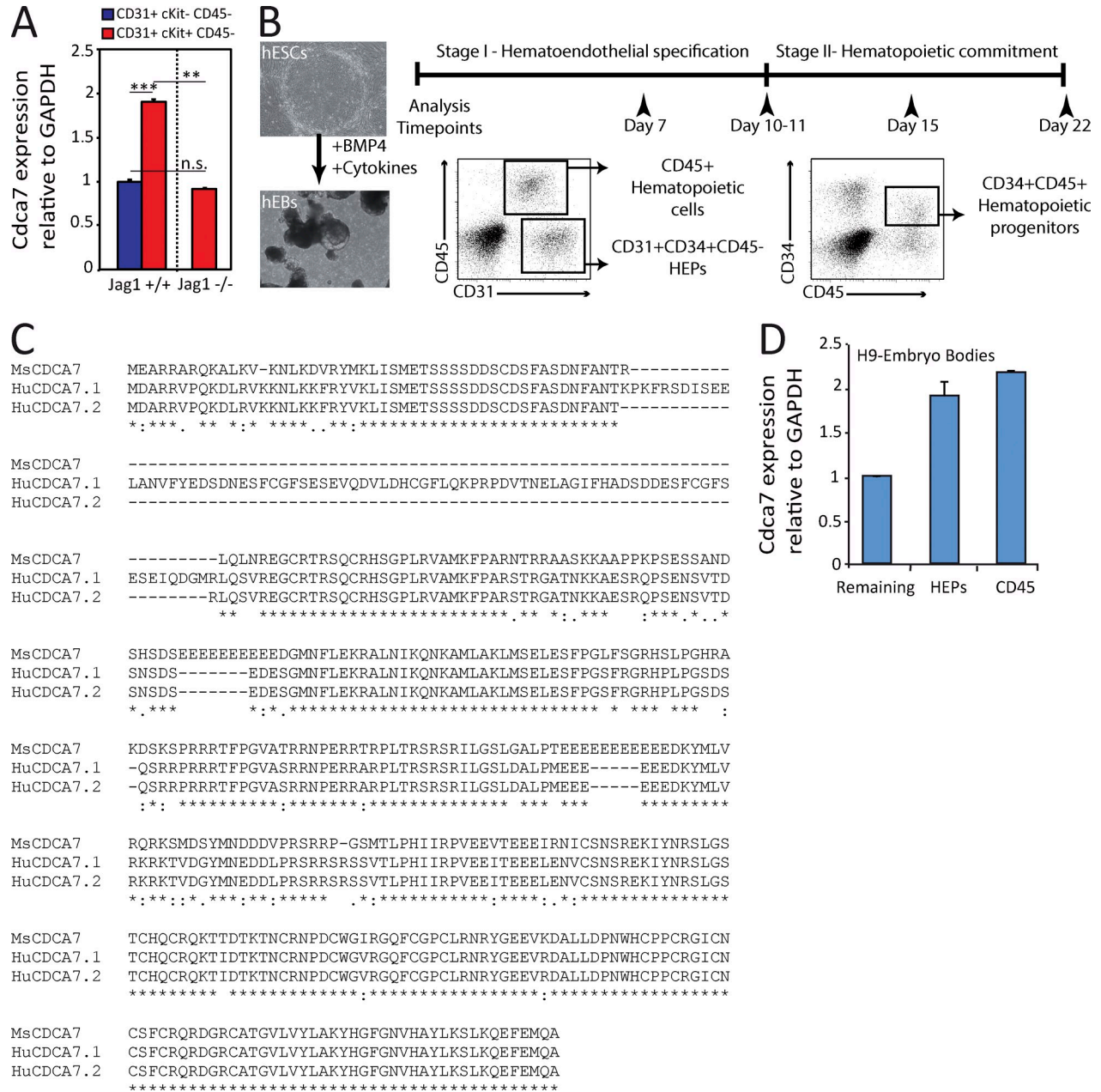
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MsCDCA7    MEARRARQKALKV-KNLKDVRYMKLISMETSSSSDDSCDSFASDNFANTR----------
HuCDCA7.1  MDARRVPQKDLRVKKNLKKFRYVKLISMETSSSSDDSCDSFASDNFANTKPKFRSDISEE
HuCDCA7.2  MDARRVPQKDLRVKKNLKKFRYVKLISMETSSSSDDSCDSFASDNFANT-----------
           *:***. ** *:* ****..**:************************

MsCDCA7    ------------------------------------------------------------
HuCDCA7.1  LANVFYEDSDNESFCGFSESEVQDVLDHCGFLQKPRPDVTNELAGIFHADSDDESFCGFS
HuCDCA7.2  ------------------------------------------------------------

MsCDCA7    ---------LQLNREGCRTRSQCRHSGPLRVAMKFPARNTRRAASKKAAPPKPSESSAND
HuCDCA7.1  ESEIQDGMRLQSVREGCRTRSQCRHSGPLRVAMKFPARSTRGATNKKAESRQPSENSVTD
HuCDCA7.2  --------RLQSVREGCRTRSQCRHSGPLRVAMKFPARSTRGATNKKAESRQPSENSVTD
                   **  **********************.** *:.***   :***.*..*

MsCDCA7    SHSDSEEEEEEEEEEDGMNFLEKRALNIKQNKAMLAKLMSELESFPGLFSGRHSLPGHRA
HuCDCA7.1  SNSDS-------EDESGMNFLEKRALNIKQNKAMLAKLMSELESFPGSFRGRHPLPGSDS
HuCDCA7.2  SNSDS-------EDESGMNFLEKRALNIKQNKAMLAKLMSELESFPGSFRGRHPLPGSDS
           *.***       *:*.********************************* * *** ***  :

MsCDCA7    KDSKSPRRRTFPGVATRRNPERRTRPLTRSRSRILGSLGALPTEEEEEEEEEEEDKYMLV
HuCDCA7.1  -QSRRPRRRTFPGVASRRNPERRARPLTRSRSRILGSLDALPMEEE-----EEEDKYMLV
HuCDCA7.2  -QSRRPRRRTFPGVASRRNPERRARPLTRSRSRILGSLDALPMEEE-----EEEDKYMLV
            :*: **********:*******:*************** *** ***      *********

MsCDCA7    RQRKSMDSYMNDDDVPRSRRP-GSMTLPHIIRPVEEVTEEEIRNICSNSREKIYNRSLGS
HuCDCA7.1  RKRKTVDGYMNEDDLPRSRRSRSSVTLPHIIRPVEEITEEELENVCSNSREKIYNRSLGS
HuCDCA7.2  RKRKTVDGYMNEDDLPRSRRSRSSVTLPHIIRPVEEITEEELENVCSNSREKIYNRSLGS
           *:**::*.***:**:**:*****    .*:***********:****..*:***********

MsCDCA7    TCHQCRQKTTDTKTNCRNPDCWGIRGQFCGPCLRNRYGEEVKDALLDPNWHCPPCRGICN
HuCDCA7.1  TCHQCRQKTIDTKTNCRNPDCWGVRGQFCGPCLRNRYGEEVRDALLDPNWHCPPCRGICN
HuCDCA7.2  TCHQCRQKTIDTKTNCRNPDCWGVRGQFCGPCLRNRYGEEVRDALLDPNWHCPPCRGICN
           ******** ************** :***********************:************

MsCDCA7    CSFCRQRDGRCATGVLVYLAKYHGFGNVHAYLKSLKQEFEMQA
HuCDCA7.1  CSFCRQRDGRCATGVLVYLAKYHGFGNVHAYLKSLKQEFEMQA
HuCDCA7.2  CSFCRQRDGRCATGVLVYLAKYHGFGNVHAYLKSLKQEFEMQA
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Figure S2. Cdca7 is expressed in human and mouse hematopoietic progenitors. This figure is related to Fig. 3. (A) Cdca7 expression from sorted CD31^{+}cKit^{−}CD45^{−} and CD31^{+}Kit^{+}CD45^{−} populations derived from E10.5 *Jag1^{+/+}* and *Jag1^{−/−}* dissected AGMs. (B) Experimental design depicting hESC differentiation toward blood in EB system. (C) Clustal alignment to compare the mouse Cdca7 with its human homologue variants. Asterisks indicate positions for fully conserved residues; colons indicate conservation between groups of strongly similar properties, scoring >0.5 in the Gonnet PAM 250 matrix; and periods indicate conservation between groups of weakly similar properties, scoring ≤0.5 in the Gonnet PAM 250 matrix. (C and D) Cdca7v2 in sorted subpopulations (D) was analyzed by qPCR (C). (A and D) Error bars represent the SD (**, P < 0.01; ***, P < 0.001; n.s., not significant).

Table S1, included as a separate PDF file, shows Chipper- and iChip–identified RBPj target genes.

Table S2.   Mouse expression RT-PCR primers

Name	Forward	Reverse	Used in
Cdca7	5′-ATGATGTGCCCAGAAGTCGGAG-3′	5′-GCAGTTGGTTTTGGTGTCAGTGG-3′	Fig. 2, B–D
Wasf1	5′-TGTGTAACCAACATTTCCCTGGC-3′	5′-CTAACAGACAATCGGTCCACGC-3′	Fig. 2, B–D
Ect2	5′-ACGACAGCGTGTTACCATCTCC-3′	5′-CCTGCGGCATTTCTTCATCAAC-3′	Fig. 2, B–D
Hes1	5′-CGGCATTCCAAGCTAGAGAAGG-3′	5′-GGTAGGTCATGGCGTTGATCTG-3′	Fig. 2, B–D
Gata2	5′-ACACACCACCCGATACCCACC-3′	5′-CCACAGGCGTTGCACACAGG-3′	Fig. 2 C
Dll4	5′-AAGGTGCCACTTCGGTTACAC-3′	5′-AGATGCCCACAGGAGCTACAG-3′	Fig. 2 C

Table S3.   Human expression RT-PCR primers

Name	Forward	Reverse	Used in
Cdca7 v.2	5′-GATCTGGGCACCCGCCACCA-3′	5′-TGACTGCAGCCTCGTGTTTGC-3′	Fig. 3, H and I

Table S4.   Promoter mouse primers

Name	Forward	Reverse	Used in
Cdca7 (−592/−423)	5′-CCTTCGGAGAGGCTTTACTCAAC-3′	5′-AGAACAGAACGGGGATACCACC-3′	Fig. 2, A and B
Ect2	5′-AACCTCCTTTTGATAGGCTGGAAC-3′	5′-CGGATTTGAAACACACTCACAACC-3′	Fig. 2, A and B
Hes1	5′-GCCGCCAGACCTTGTGCCTA-3′	5′-TCCAGATCCTGTGTGATCCGC-3′	Fig. 2, A and B
Wasf1	5′-GGGAAATGTAGTTTGGAGCGAGG-3′	5′-TCGGGAATGAGGGAAGATGAC-3′	Fig. 2, A and B
Gnai1	5′-TGTAGGCTTAGGTAAAGAACCGTGG-3′	5′-AAGGGAGGAAGTGAGCATTGGC-3′	Fig. 2 A
Gna12	5′-GAATGACCCTTGTTTCAATGCTG-3′	5′-TTATCCTTCTTGACCCGTCTCCC-3′	Fig. 2 A
Fbxl19	5′-CTTGTTAGTCATTCTTCCCGCTCC-3′	5′-CCACCTTTACTTTCCAGGACGAG-3′	Fig. 2 A
R28S	5′-GAGCCTAGAGATGGGCTGTG-3′	5′-CTGGGACATAGTGGGTGCTT-3′	Fig. 2 A
Cdca7 (−393/−166)	5′-GCGAAAGTGTGAACGCAGTA-3′	5′-GCGGTTCTCGTGGTTGTAAT-3′	Fig. 3, B–D
Cdca7 (−2,513/−2,316)	5′-TTCTGCATGCTAAGGGCTTT-3′	5′-CTTGTGCTTCTGTTCCGTCA-3′	Fig. 3, B–D
Cdca7 (−4,244/−4,016)	5′-CGTTTCCGTTGATACCGAGT-3′	5′-TGACAAATGGAAACCCAGTG-3′	Fig. 3, B–D
Cdca7 (−7,949/−7,706)	5′-TGCTTTATGCAGTTGGATGC-3′	5′-TGGTTTGCAGTTCATTCCAG-3′	Fig. 3 B
Cdca7 (−8,899/−9,087)	5′-TTGCTTGGGGTTCAATAAG-3′	5′-TTTAGGGCTGCAGGAAAGAA-3′	Fig. 3 B