

Additional file 6: Zinc finger DNA-binding region comparison

“Choo & Klug plot” for the C2H2 zinc finger regions of the human 8q24.3 ZNF genes and all their mammalian orthologs. For each individual zinc finger, residues -1, 3 and 6 with respect to the start of the α -helix (that were proposed to be especially important for DNA-binding specificity; see text) were extracted and consecutively written down from the N- to the C-terminal end of the whole array. For species designation see Additional file 1 or 2.

Upper case letters: Residues from canonical, complete C2H2 zinc fingers

Lower case letters: Residues from non-canonical, degenerate C2H2 zinc fingers

- separator of individual C2H2 zinc fingers

* indicates Stop codon within sequence

xxx further sequence (non C2H2 or very degenerate sequence with less than 2 out of the 4 C2H2 conserved residues at the right positions) triple x equals length of a typical C2H2 domain

gap no sequence in between but inserted to keep alignment of orthologs

ZNF251

>hsZNF251

YDR-HNL-LHL-RTQ-**QQQ**-RSQ-QSL-FHE-RTQ-QQL-RTQ-**xxx-xx**-pre-GTQ-**xxx**

>ptZNF251

YDR-HNL-LHL-RTQ-**QQQ**-RSQ-QSL-FHE-RTQ-QQL-RTQ-**xxx-xx**-pre-GTQ-**qqp**

>mmulZNF251

YDR-HNL-LHL-RTQ-**QQQ**-RSQ-QSL-FHE-RTQ-QQL-RTQ-**xxx-xx**-pge-GAR-**qqp**

>mmZNF251/Zfp251

YDR-HNL-LYL-RSQ-**QQQ**-RSQ-QSL-FHE-RTQ-QQL-RAQ-**yss-xx**-tqd-**sst**

>rnZNF251

YDR-HNL-LYL-RSQ-**QQQ**-RSQ-QSL-FHE-RTQ-QQL-RAQ-**xxx-xx**-sqd-**sst**

ZNF34

>hsZNF34

QYN-**xxx**-YNK-QEN-RNK-ASQ-DIR-QNQ-QKE-QHQ-NRH-QYQ-HNQ

>ptZNF34

QYN-**xxx**-YNK-QEN-RNK-ASY-DIR-QNQ-QKE-QHQ-NRH-QYQ-HNQ

>mmulZNF34

QYN-**xxx**-YNK-QEN-RNK-ASY-DIR-QNQ-QKE-QHQ-NRH-QYQ-HNQ

>cfZNF34

QYN-**xxx**-YNK-QEN-QNK-ASY-DIR-QNQ-QKE-QHQ-NRH-QYQ-HNQ

>btZNF34

QYN-**xxx**-YNK-QES-QNK-ASY-DIR-QNQ-QKE-QHQ-NRH-QYQ-HNQ

ZNF517

>hsZNF517

y1r-QIR-QQA-RRQ-RTE-RSK-**xxx**-HLL-RNL-RTE-RTQ

>ptZNF517

y1r-QIR-QQA-RRQ-RTE-RSK-**xxx**-HLL-RNL-RTE-RTQ

>mmulZNF517

y1r-QIR-QQA-RRQ-RTE-RSK-**xxx**-HLL-RNL-RTE-RTQ

>cfZNF517

y1r-QIR-QQA-RRQ-RTE-RSK-**xxx**-HLL-RNL-RTE-RAQ

ZNF7

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>hsZNF7
adl-dqh-LQQ-LKQ-QSH-QQR-QTQ-dsa-WRQ-CRR-QHQ-QSY-MQI-QTQ-RYE-xxx-WHI-RRQ
>ptZNF7
adl-dqh-LQQ-LKQ-QSH-QQR-QTQ-dsa-WRQ-CRR-QHQ-QSY-MQI-QTQ-RYE-xxx-WHI-RRQ
>mmulZNF7
adl-dqh-LQQ-LKQ-QSH-QQR-QTQ-dsa-WRQ-CRR-QHQ-QSY-MQI-QTQ-RYE-xxx-WHI-RRQ
>mfasZNF7
adl-dqh-LQQ-LKQ-QSH-QQR-QTQ-dsa-WRQ-CRR-QHQ-QSY-MQI-QTQ-RYE-xxx-WHI-RRQ
>cfZNF7
sdl-dqp-LQQ-LKQ-QSH-QQR-QTQ-dsa-WRQ-CRR-QHQ-QSY-MQI-QTQ-RYE-xxx-WHI-RRQ
>btZNF7
sdl-dqp-LQQ-LKQ-QSH-QQR-QTQ-esa-WRQ-CRR-QHQ-QSY-MQI-QTQ-RYE-xxx-WHI-RRQ
>mmZNF7/zfp7
WRQ-SRR-LVQ-LKQ-QSH-QQR-QTQ-esa-WRQ-CRR-QHQ-QSY-MQS-QTQ-RYE-etn-WYI-QKQ
>rnZNF7
pnp-dqh-LQQ-LKQ-QSH-QQR-QTQ-xxx-WRQ-CRR-QHQ-QSY-MQS-QTQ-RYE-xxx-WHI-RRQ
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ZNF250

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>hsZNF250
RHQ-QVK-VDQ-QHQ-HVS-VTQ-DVQ-HTN-QHQ-ASQ-LTV-QVQ-QHQ
>ptZNF250
RHQ-QVK-VDQ-QHQ-HVS-VTQ-DVQ-HTN-QHQ-ASQ-LTV-QVQ-QHQ
>mmulZNF250
RHQ-QVK-VDQ-QHQ-HVS-VTQ-DVQ-HTN-QHQ-ASQ-LTV-QVQ-QHQ
>cfZNF250
RHQ-QVK-VDQ-QHQ-HVS-VTQ-DVQ-HTN-QHQ-ASQ-LTV-QVQ-QHQ
>mmZNF250/zfp647
RHQ-QVK-VDQ-QHQ-HVS-VTQ-DVQ-HTN-QHQ-ASQ-LTV-QVQ-QHQ
>rnZNF250
RHQ-QVK-VDQ-QHQ-HVS-VTQ-DVQ-HTN-QHQ-ASQ-LTV-QVQ-QHQ
```

ZNF16

```
>hsZNF16
xxx-gdq-qvn-GDR-QSK-RNQ-RNK-QHK-RNK-QSQ-YVK-HAQ-RNL-QTQ-RNH-QHQ-QVQ-QKK
>ptZNF16
xxx-gdq-qvn-GDR-QSK-RNQ-RNK-QHK-RNK-QSQ-YVK-HAQ-RNL-QTQ-RNH-QHQ-QVQ-QKK
>mmulZNF16
xxx-GDQ-qvs-GDR-QSK-RNQ-RNK-QHK-vlp-QSQ-YVK-HAQ-RNL-QTQ-RNH-QHQ-QVQ-QKK
>cfZNF16
hdg-GDQ-QFN-VNR-QSK-RNQ-RNK-QHK-RNK-QSQ-YVK-HAQ-RNL-QTQ-RNH-QHQ-QVQ-qkp
>btZNF16
xxx-GGQ-TGQ -QSK-RNQ-RNK-QHK-RNK-QSQ-YVK-HAQ-RNL-QTQ-RNH-QHQ-QVQ-QHQ-QVK
```

ZNF252

```
>hsZNF252
    qaq-wik- VYQ-TSQ-HNH-RNQ-TFQ-LTV-QQQ-ASQ-qhq*-QNH-LSQ-QHQ-QTK-QHH-
VSQ-QQQ-ASQ-*qhq-*ts-l*tf
>ptZNF252
    *qaq-qik-*vyq-TSQ-HNH-RHQ-TSQ-ltv-qqq-ASQ-qhq*-QNH-VSQ-QHQ
>mmulZNF252
    qaq-RIK- AYQ-TSR-hnh-RHQ-TSQ-LTV-QQQ-asq-QHQ -QNH-VSQ-QHQ-QTK-QHH-
ISQ-QQQ-QHR
>cfZNF252
    PAQ-hvq- ayq-asq-HNH-RHQ-ASQ-LTV-QQQ-ASQ-QHQ -QNH-VSQ-QHQ-QTK-QHR-
VSQ-QQQ-ASQ- QHR-QTS-aaq
>mondZNF252
    lkk-KDN-qie-QTQ-RIK- AYQ-TSQ-HNH-RHQ-ASQ-LTV-QQQ-ASQ-QHQ -QNH-VSQ-QHQ-QTK-QHR-
VSQ-QQQ-ASQ- QHR-QTS
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