

# Table S5

## Sequences of the mouse and human conserved genomic regions containing predicted Dlx binding sites near the BMP4 locus

### BMP4 locus

Element B4-R1 (proximal *BMP4* promoter)

Score: 1 Position: chr14:47010669-47010684

Band: 14qC1 Strand: +

```
>mm9_dna range=chr14:47010169-47011184
CTCTCAGCTCGGATGCCGAACACCTAGCTTCCGGGCCAGGCCTCCGGC
tettgcectcccaccctccagcaccacctctcaatctactcectcect
ctcttttccctccctctcttttcttccctctctccccagctcttccccca
ggygccccctcecttcttccctctctcccttaatcgctcccccttctGGGGA
TGGGAGCCCGCCACATCCTCCCATCCAGCCAGGGGCTCGCCTCGCC
TGGCAAGCCCGGGTCCGGAAGATTGCACAGCTCCCAGCCCTCAGTTGC
CACCTGGCTGGGACCGATGCCTCCAGCTCGGGAAGCAGCCGGGGCTCAC
CTGGGGACCACGTCGACAGAGGTAAGAAAGCATGCACCAACTAGTCTCT
GTACCTTCCAAAAATACCCATGGGAGTCTGGGCTTCCCTGAGTTTAAAT
AACTGCTGCCAAACTGATGATTAACACTGAGTAATCACCATTATACC
CGAGTAATAGAGATAATGAAACACCTCTAAATCAGGTTATGGAGAAGG
GAGCTGTTGGATTGGTTTAAAGGGTGGCCTTCCGTAACCTGTTAAAGGAT
TCCCAAACGTTGAAACAGGCTGTGAGCAGGGCTGTGTGCCCGAAGGAGAT
ACCTCTTCAACTATTAGGAGGTGACTTCCCCCAAAAAAGTTTTTGTGA
GATGTTTCTGTGGACATTTGAGAATGACCAACCCCTTAACTGGG
TGCCCTCCATCGATCCCCAGGTCTAACATTTCAAGTGCACAGAGGTAGT
TTGCAGGCACCTTGGCAGGCAACAGCCTAGGCTGTGAAGCAATAGA
AAATCCTATTTATATCTCTGAAGCCTTCTTAACTGCCAGATGGTTATttt
gtttgtttgtttgtttgtttgtGGACCTTCCAGGAAGGTAACACAGTGCCT
TTTAGGCCATGTAGAGAAAAAACAAGTGCCTTTGGCCCTTTTAA
AGAAGGGAGATGAGGA
```

B4-R1 in Human (*GRCh37/hg19*) compared to *Mouse (NCBI37/mm9)*

Conservation: 96.2% of bases, 100.0% of span

Position: chr14:54423452-54424504

Band: q22.2 Strand: +

```
>hg19_dna range=chr14:54423452-54424504
CCCTCAGCTCGGATGCCACACTCACCTAGCTTCCGGGCCGGGCTCCGGC
tccttccctccctccctccctctctgcttctgcgatcttctctctctct
cttccctccctgcttttcttcttcttctctctctctctcttccccggcg
gccccctccctctccctctctccctgctgctgctccctTTCTGGGGATGG
GAGCCCGCCACATCCTCCCCTCCAGCCGCGCCGACCTCGCCTAGCAGGC
CCGGTCCCGGAAGCCAGGCAGCGCCGAGTCCGAGCTGCCGTCCGCG
CTGGGACGCCGCTGCCTCCAGCTCTGGGAAGCGGCTGGGGCTCACCTGGG
GACCAGCTGCGGAGGTACTAGAAAGCATGCACCGACTAGTCGCGGTACCT
TCCAAAAATACCCATGGGAGTCTGGGCTTCCCTGAGTTTAGTGTAACTGC
TGCCCAAACCTGATGATTAACACTGAGTAATCACCATTATACCCTGAGTA
ATTAGAGATAATGAAACACCTCTAAATCAGGTTATGGAGAAAGGAGCTG
TTGGATCGGTTTAAAGGGTGGCCTTCCATAAACTGTTAAAGATTTCCAA
ACGTTGAGAAACAGGCTGTGTGCAGAACTGTGTCCAGAGAGAGATACCT
CTTGGGCTGTAAAGGTGAATTTCCCTTCCAAACATTTCTTAAAGTGCCT
TTTGTAGAACACCTTGGTGTGACCTGAGGTAGACCCAGTAATGAGC
TCACTTCCCTCCTCCCCAAGCCATAAGACAGAGGTGGCCTGCAGACA
GGCTGGGGCCACGTTTTTTCAGTTAGAAAAACTGTCTTAGCTAGCTCAGAA
GCCGCTTAAAGAACCGACACAGCAggtattttgttgggtgttatggttgt
tgttgattttttgttCATTTTTGGTGTACCTAAGAGTCTGACACTCTG
TCTTTCCAAGGAGATAACCACAGAAGCAGTAACCTTTTAGGCCACAGGGA
GACAAAGAAAGATGCCCTTGGTCTGTTTTTAAAGGAAGAGGGGAGATGA
GGA
```

Element B4-R2 (intronic)

Score: 1 Position: chr14:47005978-47005993

Band: 14qC1 Strand: -

```
>mm9_dna range=chr14:47005478-47006493
CTCTCTCTCCAGACTGGAGCCGGTAAAGATCCCTCATGTAATCCGGAA
TGACGGCCTCTTGTCTAGGCTGCGGACGGCGCGCAGCCCAACATCTGT
AGAAGTGTCCCTCGAAGTCCCGCAGGAGCTCATGGCTTGCCTGAGCG
GCGTCTCCCGCGTGGCCCTGAATCTCGGCGACTTTTTTCTTCCCGGTCT
CAGGTATCAAAC TAGCATGGCTCGCGCTCCTAGCAGGACTTGGCATAAT
AAAAAGCACCATCAGCATTCCGGTTACCAGGAATCATGGTGTCTCTGGGGAG
GGGGTGGGGTGAAGGTTAAAGAATAAATAAACACCGATCAATAGCAG
AAATAGAGATGTCTCTGCATATGCATATAGGGGTAGCAACCGACGGTCAA
GATGTAACACAGTCCGAAAGATCAAGTTTGTGTTTCTCCCTCACACCC
TACACACACACACACAGCTGCAGCCATGCACGGCCGAAAGTAAGAATC
GCCCTGTAATTAAGTGGTCTAACTGTTTAACTCAAATAACCCAAATC
AGATAGCCTCCATCCTGTCCCAACGGCTATCTGAGCCATGATCTCAGCGT
GGCTTCTCAAGGATAAACAGTTAACATTGAGGAGTAAAGGGGGGTGGG
GGAGGGAGAATTAATGCCATCGCTTCTCACTTCGGAccttcagcctcc
ccccaccttctccacccccccccccccctctctccgcccctca
gcccatttccacAACTCCAGCTGGTTAAGAACAGGAGGAGGGGAGAAC
AGAGCTGTGCCGCGAGGGCTTGGACCGGCGAGCAAGGTCCAGTGACTGGG
AAAAGGAGTCAGGGGCTGCCCACTGACTTTGTGATTTATTTCAATTGTA
GTGCTCGGTTGAAAATGCTCAACAGTCTGTTTCCAGGGGACCGT
AGGGGTGATTCCAAAACGAACATGGttttgtttttttgtttttttttt
tttttttttATGAGGC
```

B4-R2 in Human (*GRCh37/hg19*) compared to *Mouse (NCBI37/mm9)*

Conservation: 94.6% of bases, 100.0% of span

Position: chr14:54418656-54419651

Band: q22.2 Strand: +

```
>hg19_dna range=chr14:54418656-54419651
CTCTCTCTCCAGACTGAAGCCGGTAAAGATCCCGCATGTAGTCCGGAA
TGACGGCCTCTTGTCTAGGCTGCGGGCGGGCGCGCAGCCCAACATCTGC
AGAAGTGTCCCTCGAAGTCCCGCAGGAGCTCATGGCTTGCCTGAGCG
GCGTCTCCCGCGTGGCCCTGAATCTCGGCGACTTTTTTCTTCCCGGTCT
CAGGTATCAAAC TAGCATGGCTCGCGCTCCTAGCAGGACTTGGCATAAT
AAAACGACCATCAGCATTCCGGTTACCAGGAATCATGGTGTCTCTGGGGAG
GGGGAGGGGAGTGAAGGTTAAAGAATAAATAAACACCAATAAATAGGGGA
GAAATAGAGATGTGTCTGCATATGCATTTAGGGCTAGAAATGGAGGGGCA
AGATGAAAGCAGGTCAGAAAGATCAAGTTTGTGCTTCTCCCTCACACC
ACCCGCCACCCACAGCTGCAGCCATGCACGGCCTGAAAGTAAGAATC
CCCTGTAATTAAGTGGTCTAACTGTTTAACTGATGATGATGATGATGATG
GATAGCCTCCATCCTGTTAATCTTTTTTTGCTCAACTGCTATCTGGGCC
ATGATCTCAGCGTGGCTTCTGAAGGATAAACAGTTAACATTGAGGGGGT
GAAAAGGGGTGGGGGAGGAGAATTAAGATGGAATGGAATGCTCCTCCACT
ACCTTCAGCTTCTCTCCCTTTCTCCACCCTCAGAGCCCAACTTTTCAACA
ACTTCCAGTTGGTTGAGGCCAGAGGGGAAAGTGAAGGAGGAGGGGCTGG
GGGCGAAGACAGAGGGCGACAGGGTCCAGAAAGCCGAGAAGGTGGTCTGG
AGCTAACCGGGTGGCTTGAAGGCTTATTTTATGTTGGCCGATGAGTTTGA
AATATTGAGCCAAAAGTGCCTGATGCTGCCGCTCATCCCCAGGGAAGGG
GTGAGAGACGATTCCGGAGAGACCTCTGTGAGTTTTGACAAGAGAG
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