Agrin

```
                alternative exon 31a                                   mouse nise2 cluster

human      agCGAACTGGCCAATGAGATCCCCGTgtgagtagagctcggcgcccccgctccctctcactcccactcctccatccttcctggtggggagcagagtccggagcccccggggaacttttccatcccttgtggcggaggatgggggtccggcgctatt
dog        agCGAACTGACCAATGAGATCCCAGCgtaagtagcacctggccccctctcccacctctcactctcacccatctcagctcctcatccacggcagcagcatcccaagcctcaccccctaccctgcagagggcaggggcgagactttccattctctgtagg
mouse      agCGAGCTGACCAATGAGATCCCAGCgtaagtaggctcttggctctagtcatacctggcactcactcatgtccatgctttgctcccagcattacaatcttgagccctattagaggtagactgtctaccctggatggaggatggggtcagagcctg
rat        agCGAGCTGACCAATGAGATCCCAGCgtaagtaggctcttggctctagtcatgcctggcactcactcatgtccatgctttgctcccagcatcacagtcttgagccctattgaaggtagaatttctaccctggatggagaatgggatcggggcctg
opossum    agCGAACTGACCAATGAGATCCCAGCgtaagtagcacagtagccctatcctcctcttattggacaccccatcatcgtccctgatcatgcagcccccatcctcataggccagtcaaggcttgccatctgtagaaactggccatccattcccagacttctta
chicken    agCCACCTGAGCAATGAGATCCCTGCgtaagtacagccctccctgcagccccacctgtggggcaggatggggacaggcatgggggacatttgcctggggctgccaccgggtgggcacttccagcccatggcacagctctggtgactcaccagggcttct
xenopus    agCCAACTAACTAACGAGATACCTGAgtaagtaaatagttttccaaaaactctcatcacctggctcgaactcatctgcctataattgtaccattaggtttgctgttcatgggctgccatactctccattccattgtacttgtcagtgcagaggc
zebrafish  agCCAACTGACCAATGAGATCCCAGAgtaagttaccccggagaccttttaggatgaattttaataagagaaactaacacttaaaaaacaaaccatcaaaataaccagcataaagcattgatatttaatttttgcattggtatttccattttacatcac
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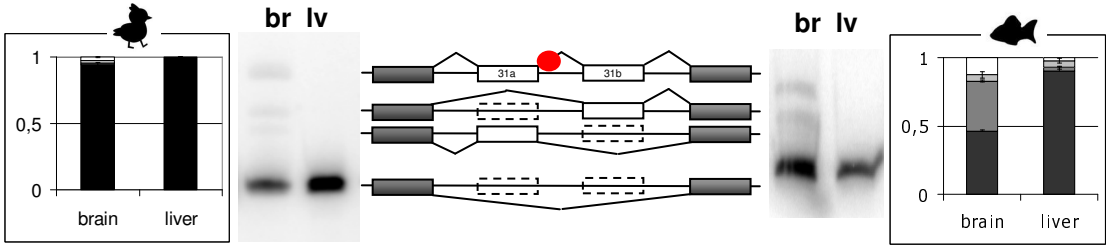

Ank3

```
                                mouse niss2 cluster                                                                alternative exon 31

human      catgcattaattttttttattcatctcatcatcatctaccactgttgaatggttaactgtaaatacaacagCCTCCGCTCCTTCAGTTCGGATAGGTCTTACACCTTGAACAGAAGCTCCTATGCACGGGACAGCATGATGATT
dog        catgcattaattttattttattcatctcatcatcatccaccactcttgaatggttaactgtaaatacaacagCCTCCGCTCCTTCAGTTCGGATAGGTCGTACACCTTGAACAGAAGTTCCTATGCGCGGGACAGCATGATGATT
mouse      attgcatgcctttattttcttTcatccccatcatcacctcccactgttgaatgggtgactgtaaatacaacagCCTCCGCTCCTTCAGTTCGGATAGGTCCTACACCTTGAACAGAAGCTCCTACGCAAGGGACAGCATGATGATA
rat        gttgcatgcctttattttctcgcatctcatcgtcaccctcccaccatcgaatgggtgactgtaaatacaacagCCTTCGCTCCTTCAGTTCGGATAGGTCCTACACCCTGAACAGAAGCTCCTATGCGCGGGACAGCATGATGATC
opossum    attaattTcattttttattcatctcatcatcatcatctggcactgttgaatggttaactgtaaatacaacagCCTCCGCTCCTTCAGTTCGGATAGGTCTTACACACTGAACAGAAGCTCTTACGCCCGGGACAGCATGATGATT
chicken    attaatttattttattttttgttcatctcattgtcatctgcacttttctatgataaaatggtaaatacaacagCCTCCGCTCCTTCAGTTCGGATAGGTCCTACACTCTGAACAGAAGTTCTTATGCCCGAGACAGCATGATGATT
xenopus    ttttgtttgtttgtttttttcgttcatctcattgtcatccacgtgtgctgtggtattttgtaaatgcaacagTCTCCGCTCCTTCAGTTCGGATAGGTCCTACACACTAAACCGAAGTTCCTTTGCTCGGGACAGTATGATGATT
zebrafish  gtttgttcgtctttggctttgtgtttgtgtgtatgtgcttgtgcccatgtgtgaacctcttacacactccagTCTGCGCTCCTTCAGCTCAGACAGGTCCAACACACTGAACAGAAGCTCCTTCGCTCGGGACAGCATGATGATT
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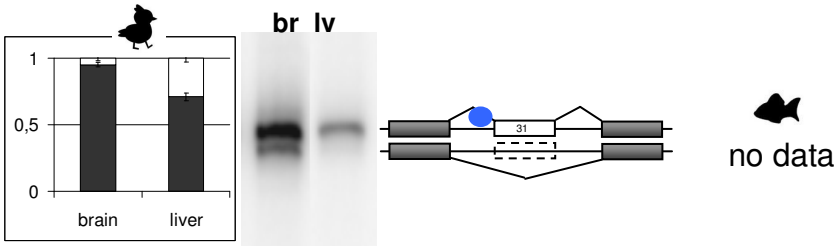

no data

Aplp2

```
                alternative exon 14                                                                                                mouse nise2 cluster

human      agACACTCAGCCGGAGTTGTACCACCCAATGAAAAAAGgttggtttgtccaagatgttcccttt---aagacc-ttcattcctctccactccctagtgtgtccgaagcttcatgttctgtttcatgccatcacctggctttccc
dog        agACACTCAGCGGGAGTTGTACCACCCAATGAAAAAAGgttggtctgtcaaagatgttcccttt---aagacc-tcattcctctcacttcccccgtgtgtcaggagtttcattttctgtgtcataccatcaccctgagattttt
mouse      agACACTCAGCCGGAGTTGTACCACCCAATGAAAAAAGgttggtttgtcaaagacgttcctt-----aagacctccattccttctcacttccccagtgtgttggaagttcattttatgtttcataccaccatctgactctccc
rat        agACACTCAGCCGGAGTTGTACCACCCAATGAAAAAAGgttggtttgtcaaagatgttcctt-----aagact-tcattccttctcacttccccggtgtgttggaagtttcattttatgtttcataccaccatctgactttccc
opossum    agACACCCAGCCGGATTTGTACCACCCAATGAAAAAAGgttggtttgtaaaagctgctcctccctgtaagccttccatcacttttccaattcctcagtgtgctggtagtttcattttatgtttcataccatcaccctgattttttt
chicken    agATCCTCAGCCGGATTTGTACCATCCAATGAAAAAAGgttggttctaagctgctccctcac---agtgcttctatcactctcctaccttctctgtgtgctcgataagcttcattttagtt-tcatac--tcaccttttatttca
xenopus    agAAACACAACGGGATTCCTACCTTCCAGTGAGAAAAGgttggtttttacacaaactaaattctcaaggttttgcaccaccccccattttgcttcttcttttttaattttttctttatattgagggaacttttcaccatatgtcaaa
zebrafish  agGCGATCTCTCTGAACCCCCTCGTGCCTTCAAGAAAGgtgggtctttgctgcttttctcggtttctctttttttctcctcagcctccggaaatgttgtgtttgctgtttttttgtttttaatttttgcatctagggctggg
           **       *     **       *   *  * *  ****** ***                                                                  **  *  *              ** *
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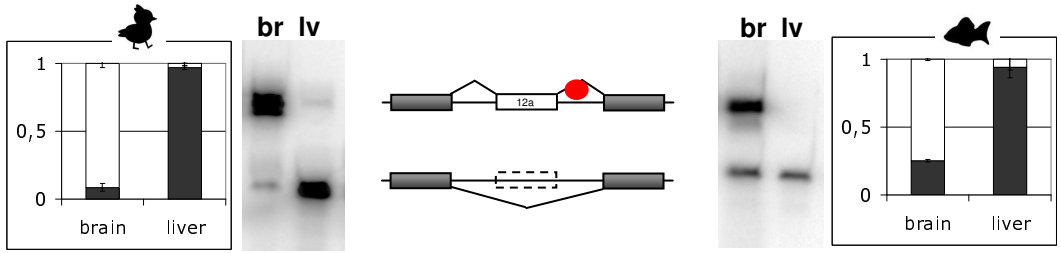

Brd9

mouse nise1 cluster

```
human     gctcttagg--ccag--gtga-ggctgtgaccatccccatcccatcccatcgtcacgg-caccctg--g---ctgtgagggagaggtaaat-----ccctgctgctctgtcctt--tctg--attctaggagcgg
dog       gcggttagg--ccag--gtga-ggctg-ggccatccccatccca-cccatcgtcatgg-caccctg--g----tgtggggcagaggtaaag-----ccctgctgctctgtcctt--tttg--attctaggagcgg
mouse     gcgattagg--ccag--gtga-ggccgtggccat-cccatgccatcccatcgtcacgg-ctccgtg--g---c--tgagggagaggtaaag-----tcctgctgctctgtcctt--tctg--attctaggagcgg
rat       gcgattagg--ccag--gtga-ggccgtggccat-cccatgccatcccatcgtcacgggctccgtg--g---c--tgagggagaggtaaag-----tcctgctgctctgtcctt--tctg--attctaggagcgg
opossum   gccattaga--aatgaagtaagggccatggccattcccatcccatcccattctcatag-cgccttg--g---ctatgcgggaaaggtaaag----tccctgccgctctgtcctt--tctg--attctaggaacgg
chicken   ggcataaagaacaaa--ataa-ggccatggccattcccatcccatcccattatcatag-catcttg--g---ctatgagggaaaggttaag----tccctgccgctctgtcctt--tctg--attctaggaacgg
xenopus   c-----agc-ttatt--gtga-ggcat-tgccattcccatcacatccattcatcatag-caccttt-tg---ctatgattgaaatgtaaag----tcccctgctgctctgtcctt--tttttaattctaggaacgg
zebrafish-----------------tctg-gttttcgccattttgcgcgtc-tcccatcttcatgg-cataccgaaggcctcccgcaggaggagtaaatgggtgctgtgttgctctatttgtgctctg--ttcacaggagcgg
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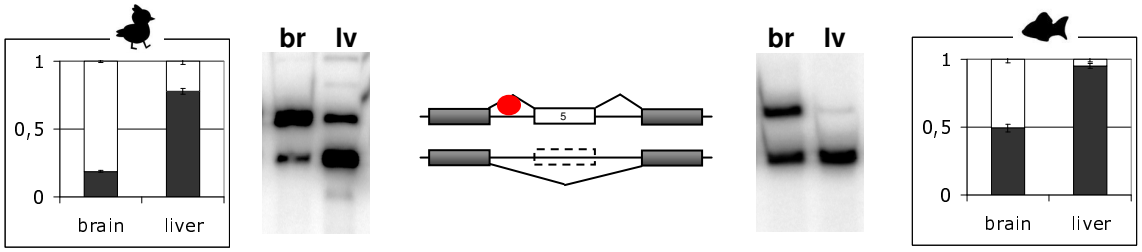

Cacna1b

alternative exon 24a *mouse nise2 cluster*

```
human     agGAGCTTCGTGGGgtaatgccttctctcccccacacgctgcccctgacatcacagcattccagcagcccctcttgggtcatttcatctccagcctcaccccccgcccatccacttttcaccccatcggggctgcatgctgccggg
dog       agGAGCTTCATGGGgtaatgccttccctctgccccttacactgccccgcatcatagcaaagcctggctccttctgggccagttcaccaccatgcctcaccctttgctcatcctcctccacctgccagggtgcatgctgccaggagcc
mouse     agGAGCTTCATGGGgtaatgcctcccctttctttcatattgccttacatcatggcacgcctctggcccatccatcatggcctcacacctgctcatctacctccacccctgtttaggctgcatgcttcctcccaggagccatcccca
rat       agGAGCTTCATGGGgtaatgtctcccttcccttgacattgccttacatcatggcacgcctctggccttttggcccatccatcatggcctcacacctgctcatcccacctccaccctctttaggctgcatgctccccccaggagccat
opossum   agGAGCTTTATGGGgtaatgcgttcttgctgtctctcctgccctactaataatgcctgtgcactctcacacacccttagcaaaccacatcccaggcaacatggctgtaatccatgttatcctcttccgaatcaattggattcca
chicken   agGAGTTTCATGGGgtaatatgttattcctgtatcttgctgcactgttatgcctgtcaaatgtgtgtacacacacttaccacctgtggaaatggttcatgttacaccccattgcatcgatccctctgtcagttatcttaacgctgtc
xenopus   agGAGTTTTGTTGGgtaaattgaatctcctttctctgcacatacagcactgctctgtatgggagcacatgtttgtttttttcaaacaaccccataatgtagacgcattgcaatgccttcatccgtcccccagaggtagagaaac
zebrafish agGAGCTTCATGGGgtaacgccttaactctctctgtctttgtttctgtttctgtctctttcttcactgttcgttttcttcctgtctctatgtgagaacacttagcttagctcatagacaagcattattcaagcatggattctt
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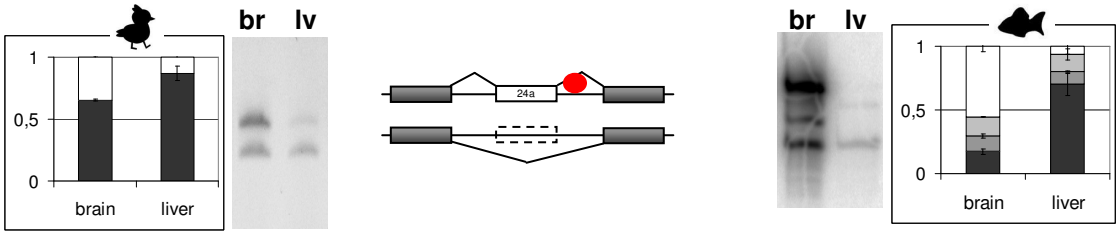

Camk2g

alternative exon 13a *mouse nise2 cluster*

```
human     agAAAAGGAAGTCGAGTTCCAGCGTGCACCTAATGgtgagccttgcctgccccacccatcgcccactccatgctgcctgtgcccgcctgccagccacgcaaacctgttctgccacgtgcgtgtgcctcactcatcctcactgcatg
dog       agAAAAGGAAGTCGAGTTCCAGCGTGCACCTAATGgtgagccttgcctgccccacccacctgcctatccatgctgcctgcgcccgcctgccagccacgcaaaccccatttctgccatgtgcgtgtgcttcactcatcctcactgcatg
mouse     agAAAAGGAAGTCGAGTTCCAGCGTGCACCTAATGgtgagccttgcctgccccacccacccctccacttcatgctgcttgtgcccgcctgccagccatgcagaccccattctgccatgtgcgtgtgcgtcactcatcctcactgcatg
rat       agAAAAGGAAGTCGAGTTCCAGCGTGCACCTAATGgtgagccttgcctgccccacccacccccccactccatgctgcttgtgcccgcctgccagccatgcagaccccattctgccatgtgcgcgtgcgtccctcatcctcactgcatg
opossum   agAAAAGGAAGTCGAGTTCCAGCGTGCACCTGATGgtgagcccggcctgcccacccatctgcccaccccctgctgcccgcccgcccgccatgcatattcatcctcatgccatgcacgtctgcttgtgctcattaccaccacatct
chicken   agAAAAGAAAGTCCAGTTCCAGCGTTCAGTTAATGgtgagtgtccttcgtcttcctcaatgccgatattgctgggccttccacacgttccagccttcccccgtttttggaagttacctcggggtagggaagaagggccaccggg
zebrafish agAAAAGGAAGTCAAGCTCCAGTGTTTATTTGATGgtgagatctgttccgtgtctctcccctttcctgactctccctcaacactttctcgctctctctctctctttgtttttttttttttcttggttgagatgctcgagagttt
          ******* ***** ** ***** **   *  * ********                                  *                                  *    *
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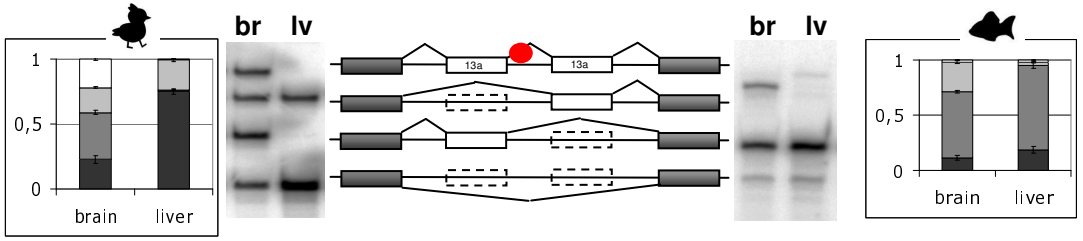

Clasp1

```
                                    5' constitutive exon                        mouse nesel cluster

human     agGGCTCTCCAAGCAATACGATTGGCCGGACGCCCTCCCGACACACCAGCAGCAGGACCAGCCCCCTGACCTCACCCACCAACTGTTCCCATGGGGGTCTGTCTCCAAGgtaaggtcacttctttactttccacagatgtaaaga
dog       agGGCTCTCCGAGCAATACAATTGGCCGGACTCCCTCCCGACACACCAGTAGCAGGACCAGCCCCCTTGACCTCACCCACCAACTGTTCCCATGGGGGCCTATCTCCCAGgtaatgccatttcaagaaaagtgaagaaactaaagc
mouse     agGGATCTCCAAGCAATACAATTGGCCGGACACCTTCCCGCCACCCCAGCAGCAGGACCAGCCCCCTGACCTCACCCACCAACTGTTCCCATGGGGGACTATCTCCAAGgtaagctcattccacagaagtgaaaaatgaaagtgc
rat       agGGATCTCCAAGCAATACCATTGGCCGGACACCTTCCCGACACCCCAGTAGCAGGACCAGCCCCCTTGACCTCACCCACCAACTGTTCCCATGGGGGACTATCTCCAAGgtaagctcattccacaggagtgaaaaatgaaagtgc
opossum   agGGCTCTCCAAGCAATACCATTGGTCGAACTCCTTCAAGACACACCAGTAGCAGGACTAGCCCCTTGACTTCACCTACCAACTGTTCCCATGGTGGTCTGTCACCAAGgtaacaataagattttaactaaaatggtctaatac
chicken   agGGTTCCCCCAGCAATACTCTTGGTAGGACTCCCTCTCGGCACTCCAGCAGCAGAACCAGCCCCTTGACTTCACCTACCAACTGTTCCCATGGTGGGCTGTCTCCAAGgtaatgtggcatgttaattaaacttaaaaaaaaaaa
xenopus   agGGATCCCCGAGCAACACCATTGGCCGAACTCCTTCCAGGCACTCGAGCAGCCGCGCCAGCCCCCTCACATCTCCCACCAATTGCTCCCACGGCGGCCTCTCCCCCAGgtaacacagtgcggcttcctgcctgcagccaacctg
zebrafish agAGTTCACCAAGCAATACAATGGGCCGCACACCAGCCCGGCACCCCACCAGCAGGACTAGTCCACTCACCTCACCCACAAACTGCTCTCATGGAGGTCTTTCGCCCAGgtacacgcacattatcatccgttcctccacacttat
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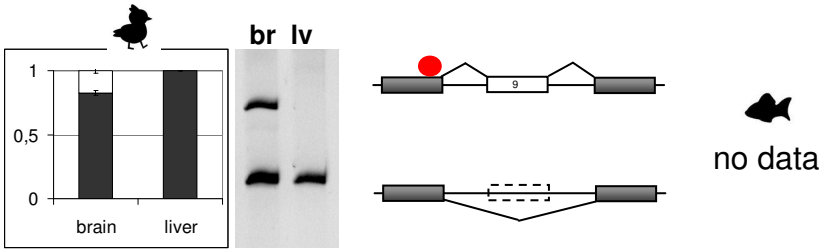

no data

Clstn1

```
                                    alternative exon 10                                 mouse nise2 cluster

human     agAGTTTTCAGGAGTTGAAAATGACAATGAAACTGAGCCTG------TGACTGTGGCCTCTGCAGgttgctggatttttccctacattcactattgtgttcatttaaagatgagactgattcattccacgtgtcgcatg
dog       agAGTATCCAGCATTTGAAAATGACAATGAAACCGAACCTG------TGCCTATGGCCTCTGCAGgttgctggatctttccctacggttcactcttgtgtttcatttaaagacgagatatcaattcattgcacatttcgca
mouse     agAGTATTCAGGAGTGGAGAGTGGCAATGAGACTGAGCCTG------CGACGATGGCCTCTGCAGgttgatggatcacccccaccccccaccccgcattccccattcactatagcgtttcctttaaagatgagacgttgatcca
rat       agAGTACTCAGGAGTCGAAAGTGGCAATGAGACTGAGCCTG------TGACGATGGCCTCTGCAGgttgctggatcacccccaccccccaccccgcactccccctcactatagtgcttcctttaaagatgagacattgatcca
opossum   agAGTATTCAGGAAATGAAAATGACAATGAGACTGAGGCTGAGGCAGTGACTGTGACCTCTGCAGgttgctggagttctctcctcctgttttctatcttatttccctttaagagacaagacaccaactcattccacatttg
chicken   agAATATACAGGAAATGAAAATGACAATGAAACCC------------TGCCTGAGACCTCTGCAGgttgctggagtttttccctactgttttatgtcattttttaagccaagacattgcttcatctcacagcatgaaatgc
zebrafish agACTTCTCAGGACATGACAATGACACTGAGACTCTCTCAG------AGCCTTTGA------CAGgttgcc-atgtctttcctgatctcaccaatctatccaaacgcacgtctctttaacgcatatgctcagcttcagtcg
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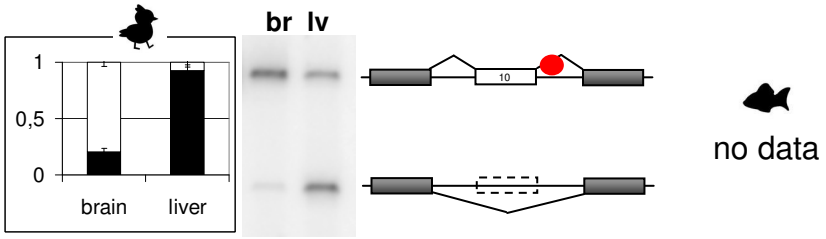

no data

Dab1

```
                                    mouse niss2 cluster 2                                   alternative exon 7c

human   -tggtta-actgtttcatgtcattttctcatcattcatttcatgctcatcagtcatgccttgtggttacagAACAGAAACCTGCCCACAGACTTTGATGAGATTTTTGA-GG-C--AACGA---AGgt
dog     -tgatta-actgtttcaggtcatgatcccatcgttcatttcatgctcataagtcgtgccttgtggttacagAACAGAAACCTGCCGATGGACTTTGATGAGATTTTAGA-GG-C--AACAA---AGgt
mouse   -tgttta-actgtttcatgttgtcggaccatcactcatttctgtgctcatccatcatgccttgtggttgcagAACAGGAACCTGTCAATGGACTTTGATGAGCTTCTCGA-GG-C--AACCA---AGgt
rat     -tgttta-actgtctcgtgttgtcggaccatcactcattctatgctcatccatcatgccttgtggttgcagAACGGAAACCTGTCAATGGACTTTGATGAGCTTCTTGA-GG-C--AACCA---AGgt
opossum -caattc-atttattgcaattgtctcatgtcattcatttcattttcataacatcatgccttgtggtttcagAACCGAAACTCAATGGTGGACTTTGACGAGTGT-TACAGGGTCGAAAATC---AGgt
chicken atgctcaga-aattcatgtcattttcataaatcattcatttcatttcataaatcatgctttacagctggagAATGGAAACTTATTGCTGGACATTGATGAAAATCTTG--GTTC--AGTCACTCAGgt
           *   *             *           *   *      ****   ** *** **   * *  ****  * ***         *** **** **   * *    *  *  *       ****
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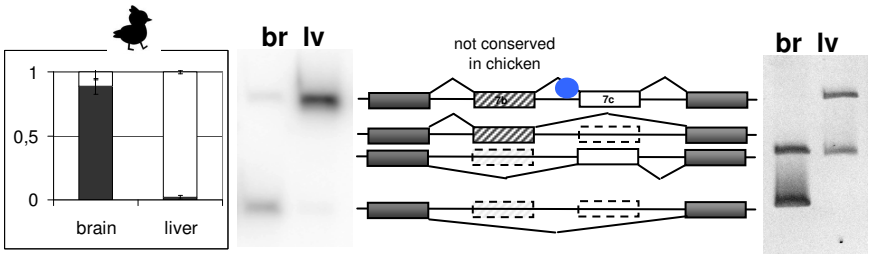

no quantification

Efna5

mouse nissl cluster

```
human     t-ttt-----------------------tt-actgttaaatct--tgtgtggtatctgttttgtatatcaacattcatatttagtttc--atcatatttt------ttctcattcttcatgatgcttttac-----------
dog       t-tttttt----tttct---tttttttttaactgttaaatcctgtgtgtggtatccgttttgtatatcggcatccgtggtttagtttc-accatgtttttttccccatcatccttcgtgatgctttt--------attt-
mouse     tgtttcattctgttttatctatttattttt-actgtcgagacg--tgtgtggtacctgttttgtatatccacatccatgtttgagttttcc-atcatattttttt----cctcattcctcatgatgctttttt------atttc
rat       tttattatt---atttct-tttttttttt-actgtcaagact--tgtgtgatccctgttatgtatatccacatccacatttgagtttccccatcgtatttcc-------cctcattcttcacgatgctttttttttttattc
opossum   t---------------------------tt-actgttaaaccc--tctgtggtatctgttctgtatatcagcattcatatttcagtttc--atcatattttc-----ttatcattcttcataaagctttta-----------
chicken   -ttttt------ttttct------tttttt-atggttaagcct--tgtgt---atctgttctgtacagcagcatttgtgttactgtttc--atggtatttc------cttatcattttcatgaagctttgtttt---------
xenopus   --------------ttct-----agttttt-actgttacgcct--tgtttgaatcttgttc------tcaacatttgtggtttagtttgc--accatatttc-------taatcattgttcattgagcttta-------------
zebrafish ----------------------ctcacttta-atggacactaatggctctctggctctcctt-------------------------------------------------------------------------
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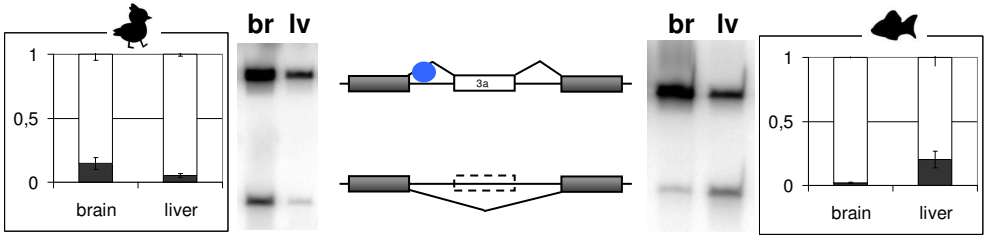
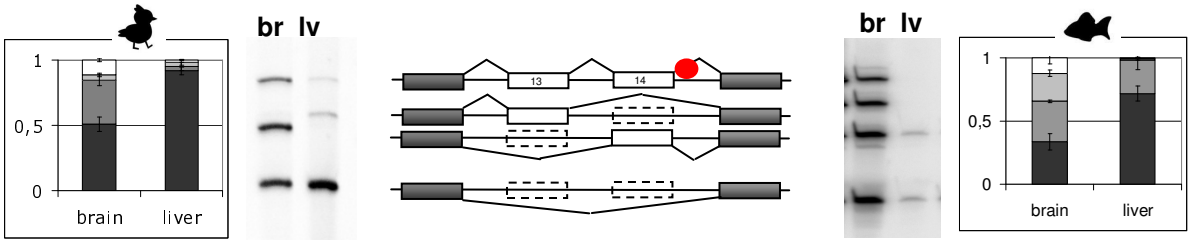


Epb4.1

alternative exon 14 *mouse nise2 cluster*

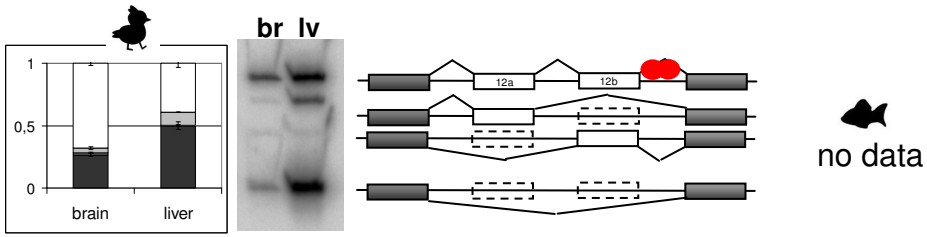
```
human     agAAGCT---TGCAGAAAAAACTGAAGATCTGATAAGAATGAGGAAGgttagccattttc------acttcacaaaactacat---tgccatttcacccatgctgact--t-acag-tgcattaaaaaga---cagtgat---
dog       agAAGCT---TGCAGAAAAAACTGAAGATCTGATAAGAATGAGGAAGgtcagccattttc------acttcacaaaaccacat---tac--tgtcacccatgctgacttct-acag-tgcattaaaaaga---cagtgat---
mouse     agAAGCT---TGCAGGAAAAGGTGAAGATCTGATAAGAATGAGGAAGgttagcctatttc------ccttcacca--gctaggc---caccattccacccatgc---ccgtt-acag-tgtattaaaaaga---cagtggt---
rat       agAAGCT---TGCAGAAAAAGGTGAAGATCTGATAAGAATGAGGAAGgttagcctgtttc------acttcaca--gctaggc---caccatttcacccatgc---ccgct-acag-tgtattaaaaaga---cagtggt---
chicken   agAAGCAGCCTGCAGAAAAAGAGGAAGAGCTGATAAGAATGAGGAAGgtcagccgttttac------gctttcaccgagcaaatt---tgccgtatcactcatgcatc---ct-cgacctgt-ttaaaaaga---cagtgct---
xenopus   agCAGCA---AGCTGAGAAAGAGGATGAAATAGTACGCATGAGGAAGgtcagcatagtgtc------tgttgaagtcaatctgtgtctttccatctctcacataaggaaagc-----aaaacatttacatcatttcat-----gt
zebrafish ag------TCGCCACGGGTGGACACAGAGATGGTGCGCATGAGGAAGgtcagagcttgttccgtacgatttcacagcatgaggaagatgccattgtactcatcatctc--ctcactg-tccatgaaaaaaa---aaaaagaaaa
          **          *             **  *  *  * ********** **        *         **  *                *  *    * ***                  *  * *  *    *
```



Epb41L2

mouse nise2 cluster

```
human     gttctcccc-tttttccat-gttaacaccattgc--ctcacgtttctcattgccctcacgtttgccc-cgcttccctttcagtcagc--c-a-----t
dog       gttctcccc-tt-ttccat-gttaacaccattgc--ctgatgtttctgactccccgct-----cccc-tgcttccctttcagtcagc--c-a-----t
mouse     gttctcctt------ccat-gttaatgccattcc--ctcacacctctcatccgcctcatggt---ca-cgcttccctttcagtccgca---------t
rat       gttctcctc------tcat-gctaatgccgttcc--ctcacgcctctcatc-ccctcgtgt-----c-cccttccctttcagtccgcatc-acagtgt
opossum   gttctccca-tttttccat-gttaattccattgc--ctgccatgtctgatcaccctcacatttcccccctcttccctttcagtcagc--cca-----t
chicken   gttctactgatttttccatagttaaa---tttggctctaactcttccgatc-----catctt---ca-ttctttctttcagttaac--c-a-----t
xenopus   gtgctcata-ttgttccata---agtactaatgtat-tcatcttaatcatc---accacattt--------tttctttcactttca-------gtt
          ** **           ***    *       *     *          *       *              **   ***** *   *          *
```



no data

Golga4

```
                                                                                   mouse nise2 cluster

human   ttag------aatactaccacctgattttgtatgtaag--cactgaagttgtta-------tcctacttatttcat-aagtg----------------gtatcttct-ttcctctctgtctccct-caaaacatctcatcttga
dog     tcaggggagaagcactagcacctgattttgtatgtaag--cactgaacttgttaa------tcctacttatttcgt-gagtgtatcttattcataaggtatcttct-ttcctctctgtctccct-caaaacacctcatcttga
mouse   ccaggagag----agcaccacctgacctgagatgtaag--cactgagctcatta-------ccattctcacctcat-gt-tg----------------acatcttct-ctcctctctgtctgcct-aaccacatctcatcttga
rat     ccaggagag----agtaccacctgacctgagatgtaag--cactggactcgtta-------tccttctcatttcat-aa-tg----------------acatcttct-ctcctctctgtcctcca-aacaacattcatcttga
opossum ct----gac----agctggacatgattttatatttaaa--cactgaatttgtta-------tc-ttct--tttcat-aagtg----------------gtgtcttct-ttcctctctgtttccct-caaaactcctcaccttga
chicken acatgtgag-----gctggtaataa----acagttgacttca-ag-agcagcaatcttatcgcatccaca-ttcttgaagag--------------------caacagctact-gct-tctgtagcaatcacat-tctgtttga
                                  * *      *  * *   **  *        *        * * *     ** *     *                   *  *   * **  ** *        *  **   **   ****
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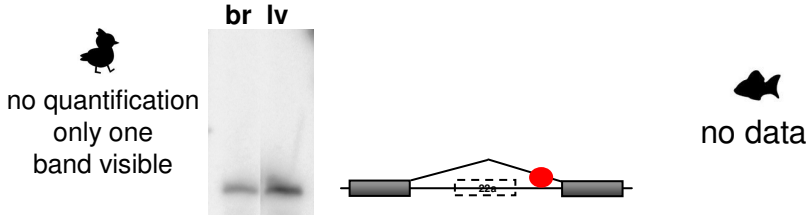
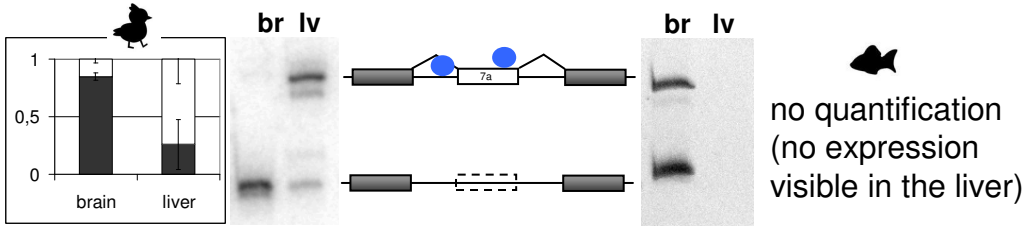


Gphn

```
            mouse niss2 cluster                                                   alternative exon 7a                  mouse ness2 cluster

human   ttcatgttttcctgtcactatattcatagttgttatgtgttgtgcattagAAGCATCCATTCTACACCAGTCCTGCTGTTGTCATGGCACACGGTGAACAGCCCATCCCTGGTCTCATCAATTATTCCCATCATTCAACAGATGAA
dog     ttcatgttttcctgtcactatattcatagttgttatgtgttgtgcattagAAGCATCCATTCTACACCAGTCCAGCTGTTATCATGGCACACGGTGAGCAGCCCATTCCTGGTCTCATCAATTATTCCCATCATGCAACAGGCAgt
mouse   ttcatgttttattctcattgtattcataattgttatgtgttatacattagAAGCATCCATTCTACACCAGTCCTGCTCTTTTCATGGCAAATCATGGGCAGCCCATCCCTGGTCTCATCAGTTATTCCCATCATGCAACAGGCAgt
opossum ttcatgttttcctatcactgtattcatagctgttatgtgttgtgcattagAAGCATCCATTCTACACCAGTCCTGCTGTTATCATGGCACACGGTGAGCAGCCCATTCCTGGTCTCATCAGTTATTCCCATCACGCAACAGGCAgt
chicken ctcatatttcctgtcactgtattcatagctgttatgtgttgtgcattagAAACATCCATCCTACACCAGTTCAGCAGTTATTATGGCAAAAGGTGAACAGCCCATTCCTGGTCTCATCAGTTATTGCCATCATGCAGCAGGCAgt
         **** ****  * *** * ********  *********** * ******** ******* ********** * **   ** * ****** *    **  ******** ************* ***** ******   ** ***
```



Kcnma1

```
                    5' constituitive exon                                                   mouse nesel cluster

human     agGGTTCACACCTCCAGGAATGGATAGATCCTCTCCAGATAACAGCCCAGTGCACGGGATGTTACGTCAACCATCCATCACAACTGGGGTCAACATCCCCATCATCACTGAACTAGgtagggg-tcaatgtcagctttgggggga
dog       agGGTTTACACCTCCAGGAATGGACAGATCCTCTCCAGATAACAGCCCAGTGCACGGGATGTTACGCCAGCCATCCATCACAACTGGAGTCAACATCCCCATCATTACTGAACTAGgtaggga-tgaatgtcagctttgggaaga
mouse     agGATTCACACCTCCTGGAATGGACAGATCATCACCCGACAACAGCCCAGTGCACGGGATGTTACGCCAGCCGTCCATCACAACTGGGGTCAACATTCCCATCATCACGGGAACTCGgtagggggtcactgt-agctcactgcgtg
opossum   agGGTTCACACCACCAGGAATGGACAGATTATCTCCAGACAACAGTCCAGTCCACTTGCATCAGCCATCACATTCCCTCACATCTGGGGTCAGCCTCCCCATGATCACTGAGCTAGgtaaggaggtgaattt-acaaccccatttt
chicken   agGCTTTACACCCCCTGGTATGGATAGGTCATCTCCAGACAACAGTCCTGTCCACGGCCTGTTACGTCAACCCTCCATTACAACAGGAGCCAACATCCCTATTATAACAGAGCTAGgtaagaagagaattt-atcctatcattta
xenopus   agGGTTTACGCCCCCAGGAATGGAGAGATCCTCACCTGATAATAGCCCAGTGCATGGTGTTGCAAGACAGGCATCCATAACTACAGGGGCCAACATTCCCATAATTACAGAACTTGgtaagtc-tgaattt-atctacttgtgtt
zebrafish agGTTTCACACCTCCAGGGATGGATAGGTCATCTCCTGATAACAGTCCCGTGCACGGCTTAGTGCGGCAGGCATCCGTCACCACCGGATCAAACATCCCCATCATAACTGAACTGGgtgagacgcgactcc-agt-ct--gtact
          *** ** ***** ** ** ***** ** ** ** ** ** ***** ** ** *****  ******* ** ** ***** ***** ** * ****** ** ** ** ** ** ** ***            *
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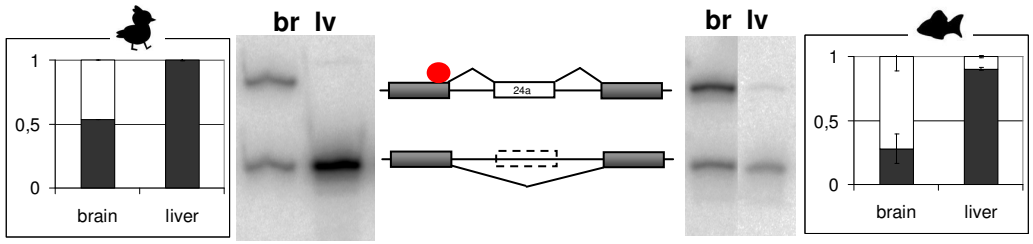


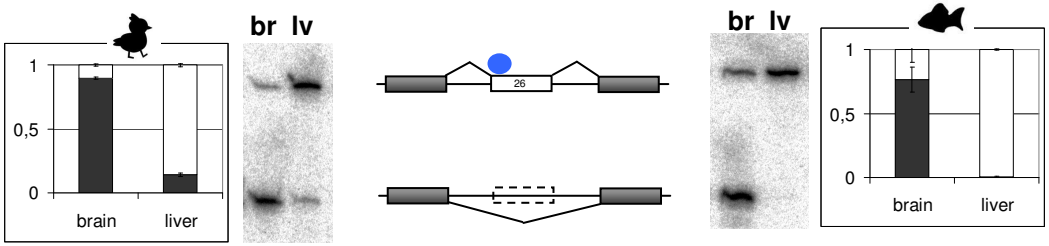
Lrrfip

```
                    mouse nise1 cluster                                                
```

Neo1

```
                                   mouse nessl cluster                                   alternative exon 26

human      agCTGTGATTAGTGCCCATCCCATCCATTCCCTCGATAACCCTCACCATCATTTCCACTCCAGCAGCCTCGCTTCT-CCAGCTCGCAGTCAT------CTCTACCACCCGGGCAGCCCATGGCCCATT---GGCACATCCATGTC
dog        agCTGTGATTAGTGCCCATCCCATCCATCCCCTCGATAACCCTCACCATCATTTCCACTCCAGCAGCCTCGCTTCT-CCAGCTCGCAGTCAT------CTCTACCACCCGGGCAGCCCGTGGCCCGTT---GGCACATCCCTGTC
mouse      agCTGTGATTAGTGCCCATCCCATCCATTCCCTCGATAACCCTCACCATCATTTCCACTCCAGCAGCCTCGCTTCT-CCAGCCCGCAGTCAT------CTCTACCACCCAAGCAGCCCATGGCCCATT---GGCACATCCATGTC
rat        agCTGTGATTAGTGCCCATCCCATCCATTCCCTCGATAACCCTCACCATCATTTCCACTCCAGCAGCCTCGCTTCT-CCAGCCCGCAGTCAC------CTCTACCACCCAAGCAGCCCATGGCCCATT---GGCACATCCATGTC
opossum    agCTGTGATTAGTGCCCATCCCATCCATTCCCTCGATAACCCTCACCATCATTTCCACTCCAGCAGCCTCGCCTCT-CCGACCCGCAACCAT------CTCCACCTTCAGGGCAGCCCATGGCCCATT---GGCACATCCTTGTC
chicken    agCTGTGATTAGTGCCCATCCCATCCATTCACTCGATAACCCCCACCATCATTTCCACTCCGGCAGCCTCGCTTCT-CCAACTCGCAGCTAT------CTCCATCACCAGGTCAGCCCGTGGCCAGTG---GGCACATCCATGTC
xenopus    agCGGTTGTCAGTGCCCATCCCATCCATTCCCACGATAATTCTCA---TCATTTTCGCTCC--GTTCCTGGGTTCATGCTGCACG-TGTTGGGTGGCCCTCCACAGGCTGCAGGTGAGA-GGGACACTCCTGGGAATGGCAGTGT
zebrafish  agCTGTGATTAGTGCTCACCCCATCCATTCCCTCGATAACCATCACCATCATTATCACTTGGGCAGCCTGGCCTCG-CCGACACGCAGCTAT------CTCCACCACCAGAGCAGCACGCGCTCCATC---GCCACCCCCATCTC
           *** **  * ***** ** ********* * * ******    **   *****  * **       *** *  **   *  * **            *** *    *             *           *  *    *
```



Plcl3

```
                    mouse nise2 cluster

human      a-taaatatat-tttaccattttattcatcacacagacactttgttgcaaacctatgca-at-ccataattatattctgtcacagt
dog        a-taaatatat-ttcgccatctactcatcacacagacactctgttgcaaacctctgcg-at-ccataact-----ctgtcacaac
mouse      g-taaatatat-ttcaccatttatccatcacacagacactgtgttgcaaacttctgcttat-ccataattatattctgtcacaat
rat        g-taaatatatatttaccattttatccatcacacagacactgtgttgcaaacttctgcttat-ccataattatattctgtcacaat
opossum    g-ccagtctagcgtcaccatctatccattacatagatattttgtactaaactcgcaca-gtcccatgagtaaat--agtcacagt
chicken    g-cagttgtat-ttttccattttattcatgtcacagataatttgggctaagcctgcgca-acaccataaca--gttctgtcacaac
xenopus    a-cctacttgt-ggggtcatgtttccattttcacataagcacttctttgtacattgaagtatacccatgaaaatgtcccttcaccctt
zebrafish  aataaaaaaagcaacaagtatctggatgttaaccaactatctggatgttctccatggaccccacattttcattatctgacttgt
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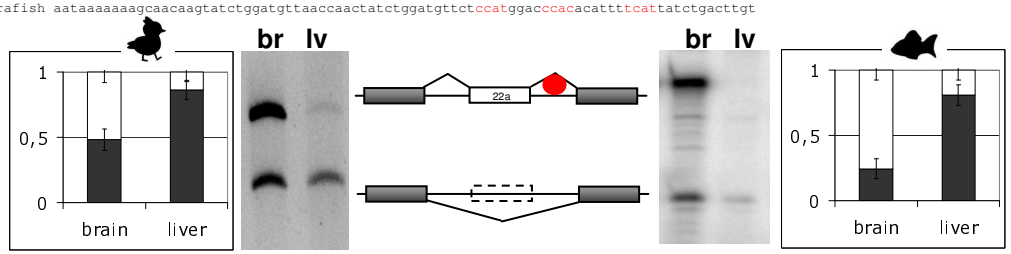

Ptprf

```
           alternative exon 6a                                                   mouse nise2 cluster

human      agGTGGTTCACCAATCAGAGGtaagaatgctgtccgtgcctctcgccacaccacgccttgccactgccgtcacctccactccatcccgtccagtctgtcacctccccatcccccatcccaacctcttcagcctcctcatctccagc
dog        agGTGGTTCACCAATCAGAGGtaagaatgctgtccgtgcatctcgccacgccacgccacgccactgccgtcaccaccactccatcccgtccagtccgtcacctcccccatcccccatcctgacctctccagcctcctcatctccag
mouse      agGTGGTTCACCAATCAGAGGtaagaatgctgtccgtgcatttcgccacgccacgccacgtcacaccacgccacaccacaccactactgtcgccgtcggtcacctccactccatcccgtccagtccgtcacctccccatacccat
rat        agGTGGTTCACCAATCAGAGGtaagaatgctgtccgtgcatttcgccacgccacgccacgtcacaccacaccacaccactgctgtcgccgttggtcacctccactccatcccgtccagtccgtcacctccccatccccatcctgc
opossum    agGGGGCTCACCGATCAGAGGtaagagtgcggaccatggcccccccacgccacgccacgccacgccgcctcgcctgtgtgtcactccattttactgtccacttcatccccggcgcctgctgcagcccccgggtctacactcactcacc
chicken    agGTGGTACACCGATCAGAGGtaagaatgctgaaatgtgcctccagttgtcacgtcactccatctcctgtctgccttgtcccttctcctccagtgttgctcatctccagctttactctcagccctaactccgccagcgctctcgc
xenopus    agGTGGTACACCAATCAGAGGtaagaatgctgggatgtccttcagccgtcacttcacgccatattccttttgatttatccttttgaatccacagtcagcttgtcaaacctcatgtacccccttccttcagcatccacactcacaa
zebrafish  agGGGGTTCGCCGATACGAGGtaagacagctggaatgtgtctcccgaaacgtctcctccattacctgtttcatcacaaccactgtcatttcctgcttgttcagtacatacacaacctttgtcgtggcattcaacctgtctgcgtt
           *** **   * ** **   *********   ** *
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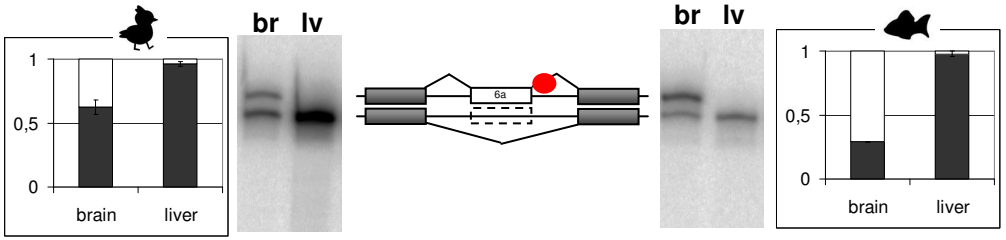

Ptprf (alt. exon 19a)

```
                    mouse nese2 cluster                constutive exon 20

human     agGTATGCGAGACCACCCACCCATCCCCATCACCGACCTGGCGGACAACATCGAGCGCCTCAAAGCCAACGATGGCCTCAAGTTCTCCCAGGAGTATGAGgt
dog       agGTATGCGAGACCACCCGCCCATCCCCATCACTGACCTGGCCGACAACATTGAGCGCCTCAAAGCCAACGACGGCCTCAAGTTCTCCCAGGAGTACGAGgt
mouse     agGTATGCGAGACCACCCGCCCATCCCCATCACTGACCTGGCAGACAATATTGAGCGCCTCAAAGCCAACGATGGGCTCAAGTTCTCCCAGGAGTATGAGgt
rat       agGTATGCGAGACCACCCGCCCATCCCCATCACTGACCTGGCAGACAATATTGAACGTCTCAAAGCCAATGATGGGCTCAAGTTCTCCCAGGAGTATGAGgt
chicken   agGCATGCGGGACCACCCGCCCATCCCCGTGACCGACCTCGCCGACAACATCGACCGGCTGAAGGCCAACGATGGCCTCAAGTTCTCCCAGGAGTACGAGgt
xenopus   agGTATGAGAGACCACCCTCCTATTCCAATCTCTGACCTGGCAGACAACATTGAAAGACTGAAGGCTAATGATGGACTCAAGTTCTCTCAGGAATATGAGgt
zebrafish agGAATGAGGGAACATCCTCCCATATCCGTCTCCGAACTGGCAGACCACATCGAGCGCCTCAAGGCCAACGATGCCCTCCGGTTTTCCCAAGAGTATGAGgt
          *** *** * ** ** ** ** **  *  *  * ** ** ** *** * ** **  * ** ** ** ** ** *  ***  *** ** ** ** ** *****
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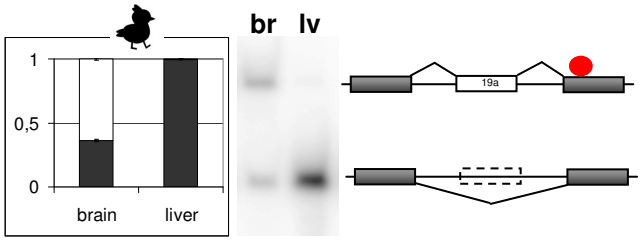
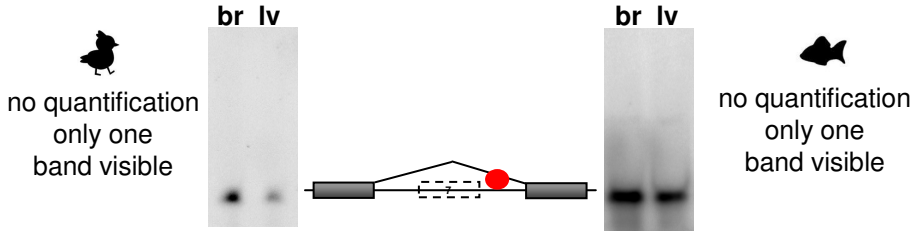


no data

St7

```
          alternative exon 7                                                    mouse nise2 cluster

human     CAAAgtaagtcaagaacctgttgggtgccctacttctaaccaaatgagacttc---tagtggatatctggatggttgacacccccatcaccacac
dog       CAAAgtaagtcaagaacctgtcgggtgccctacttctaaccaaatgagacttcttctagcagatatctggatggttgacacccccatcaccatac
mouse     CAAAgtaagtcaagaacctgttgggcaccctacttctaaccaaacgagacttg---tagccaatatctggatggttgaca-ctccatcaccac
rat       CAAAgtaagtcaagaacctgttgggcaccctacttctaaccaaacgagactgg---tagcagatatctggatggttgaca-cttcatcaccac
chicken   ------------------------------------------------------------------------------------------------
zebrafish ------------------------------------------------------------------------------------------------
          ********************* ***  ****************** ******     ***   ******************* *  ******** **
```



no quantification
only one
band visible

no quantification
only one
band visible

Stxbp2

```
                         mouse ness1 cluster                                alternative exon 3

human     ctgtccatccatctg--------gacagGTGCTTATCATGGATCACCCAAGCATGCGCATCTTGTCTTCCTGCTGCAAAATGTCAGATATCCTGGCTGAGGGCATCACCAgt
dog       ctg----ttcatctg-tcc---cgacagGTACTCATCATGGACCATCCAAGCATGCGCATCTTGTCCTCCTGCTGCAAGATGTCAGACATCCTAGCTGAGGGCATTACTAgt
mouse     atacccattcatctg--------gtcagGTCCTCATCATGGATCACCCGAGCATGCGAATCTTGTCATCCTGTTGTAAAATGTCAGATATCCTGGCGGAGGGCATCACCAgt
rat       atatccacccatctg--------gtcagGTACTCATCATGGATCATCCGAGCATGCGAATCTTGTCATCCTGTTGTAAAATGTCAGATATCTTGGCGGAGGGCATCACCAgt
opossum   att--ctagttactgctccatgctttagGTTCTCGTCATGGACCGCCCAAGCATGCGGATCCTGTCTTCCTGCTGTAAGATGTCAGACATTCTAGCAGAGGGCATCACCAgt
chicken   ctg--atggctgctg-tcc-----tcagGTGCTGGTGGTGGACCAGCTCAGCATGCGCATGCTGTCCTCCTGCTGCAAAATGACCGACATCATGACGGAGGGCATCACCAgt
xenopus   atg--ccatt---ttctcc---ccacagGTGCTTGTTGTGGATCAGCTAAGTATGCGCATGTTGTCGTCCTGCTGCAAGATGACAGATATCATGACCGAAGGGATTACTAgt
zebrafish -------------------tatattcagGTGCTCATCGTTGATCATATCAGTATGCGCATTCTGTCCTCGTGCTGTAAAATGTCTGACATCATGGCAGAGGGTGTTACAAgt
                                     **** **  *  * ***     ** ***** **  **** ** ** ** ** *** * ** **  *  * ** **   * ** ***
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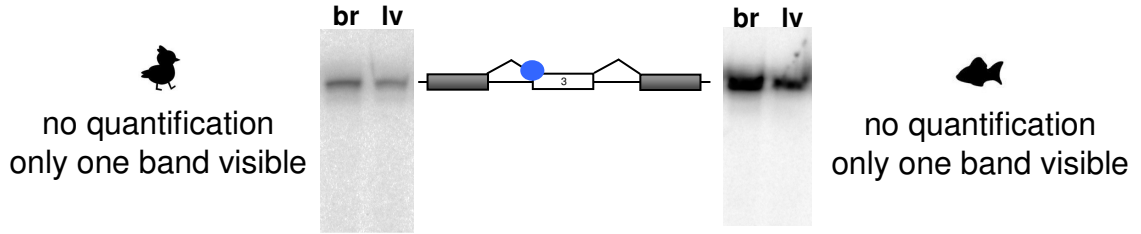

no quantification
only one band visible

no quantification
only one band visible

Tacc2

mouse nise3 cluster

```
human   tgcactttctcatactttt--ga-tgttctttgttt-caaaaccatacaattggc---ccattcatgag-agggtgagtgta---------atcctctttg-tcgta---tgattaatgctaac-----------------------
dog     agcattttctcatacttct--gg-tgtcctttgtct-caaaaccatacaactgac---ccattcacgag-aggataattgca--------gatcctgtttc-tcata---tgagtgatactaac-----------------------
mouse   tgcattttctcatagtttc--ga-tgttctttgttt-caaaaccatgcagctgag---cgggtgaatgc-ggtggtcatggccacgtgtgcagcctgtgtg-tcacg---ccattagtggtaactgacctctctctctct-tctctc
rat     tgcattttctcatagtttc--ag-tgttctttgttt-caaacccatgaggctgag---cggttgaatgt-agttctcaaggccacatgtgcagccttaggcatcacg---ccattagtagtaactgttctctctctctc--tctct-
opossum cacattttctcatagtttt--ttgtgttcatcatttacaaaaaaacaaaacaaaa---caaaacaa-ac-agcacttccctactc-cccccaccccccagcc-ccaaac--acatacattataactgaccattcatga-a-ccagat
chicken ctaatttggctctcctgatgcttactatga--attt---taaattgtattgaaatgttcctgtcaatgttaccactgtaatagtt-tagtagtgcacagg---ctctcagtcctagctcaggac--cctggtgcctagcacccaga-
           * **      *  *                 * *    *                 *     *                          *       *             *     **
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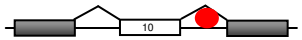
no quantification
only one band visible



no data