

(A)

```
1 10 20 30 40 50 60
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NAIP6 MAEHGESSSEDRISIDYEFFLPESLARRFGMNLVQLAKSQEEDHKEERMKMKKGFNSQMRSE
NAIP1 MAEHGESSSEDRISIDYEFFLPESLALLGVDAVQLAKSQEEDHKEERMKMKKGFNSQMRSE
NAIP2 MAAQGEAVETIICSEFDLDELVELSLLRVDALSVLRQCEEDHKEERMKMKKGFNSQMRSE
NAIP7 MAEHGESSSEDRISIDYEFFLPESLARRFGMNLVQLAKSQEEDHKEERMKMKKGFNSQMRSE
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70 80 90 100 110 120
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NAIP6 AKRLKRFES YDTPRSWTFPOEMAAAGFYHTGVK LGVQCFCCSLILP GNSERKLEIDRHKLL
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      * * * *
130 140 150 160 170 180
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NAIP2 RPECEPFLQKDVGNIGKYDIRVKSPEKMLRGGKARYHHEEARLESEFEDWFFYAHGTSPRV
NAIP7 RPECEPFLQKDVGNIGKYDIRVKSPEKMLRGGKARYHHEEARLESEFEDWFFYAHGTSPRV
190 200 210 220 230 240
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NAIP6 LSAAAGFVFPGRD TVQCFSCGGSLGNWEEGDDEPKKEHAKWFFKCEFLQSKKSSEBTRQYI
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NAIP7 LSAAAGFVFPGRD TVQCFSCGGSLGNWEEGDDEPKKEHAKWFFKCEFLQSKKSSEBTRQYI
250 260 270 280 290 300
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NAIP6 QSYEGFVHVVTGEHFVKSWVRRELEPMVSA YCNDVSVA NEELRMD MPKDNWQSEVVGVEALV
NAIP1 QSYEGFVHVVTGEHFVN SWVRRELEPMVSA YCNDVSVA NEELRMD MPKDNWHESEVAVDALV
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310 320 330 340 350 360
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NAIP1 RAGLPYTGKRDIVRCFSCGGCMERKTEGDDEIQEHNKFFPN CVFLOTLKSSABVIE ALQS
NAIP2 RAGLPYTGKRDIVRCFSCGGCMERKNWEGDDEMEDHIKFFPN CVFLOTLKSSABVIE ALQS
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370 380
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NAIP6 QYALPHEATETTR ESNHDDAAAVHSTVVD .....
NAIP1 HQALPHEAMETTS ESNHDDPAAVHSTVVG .....
NAIP2 HQALPHEAMETTS ESNHDDAAAVHSTVVD VSPSEAQLEP ASSLSVSVLCRDQDHSEAQGRG
NAIP7 QYALPHEATETTR ESNHGDAAAVHSTVVD .....
390 400 410 420 430
NAIP5 ..... LGRSEAQWFCQEARSLSEQLRDN YTKATIRHMNLPEVQSSSLGTDHLLGC
NAIP6 ..... LGRSEAQWFCQEARSLSEQLRDN YTKATIRHMNLPEVQSSSLGTDHLLGC
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NAIP7 ..... LGRSEAQWFCQEARSLSEQLRDN YTKATIRHMNLPEVQSSSLGTDHLLGC
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560 570 580 590 600 610
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NAIP7 ASLPOALHTLITKNYLSRTCLLIAVHTNRVDRIDPFLGTSLEIQEFPFFYNTVSVRKRKPS
620 630 640 650 660 670
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NAIP6 HDIICVEKLIIVYSENKDLQGVYKTELFVAAVCDWFWNNSASADKPDQDVTLEPHSXYMOYLS
NAIP1 HDIKFLLEFMYVYGGQNDLQGVYKTELFVAAVCDWFWNNSASADKPDQDVTLEPHSXYMOYLS
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NAIP7 HDIICVEKLIIVYSENKDLQGVYKTELFVAAVCDWFWNNSASADKPDQDVTLEPHSXYMOYLS
      * * *
680 690 700 710 720 730
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NAIP6 LKYNATAREP LQATVSSCGQLALTGLFSSCFEFPNSDDLABAGVDEDEKLTTLTFLMSKPTAQR
NAIP1 LKHNGAKRFLQATVSSCGQLALTGLFSSCFEFPNSDDLABAGVDEDEKLTTLTFLMSKPTAQR
NAIP2 LKYNATAREP LQATVSSCGQLALTGLFSSCFEFPNSDDLABAGVDEDEKLTTLTFLMSKPTAQR
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(B)

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740 750 760 770 780 790
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NAIP1 LRPVYRFLGPLEQBFLLAAVRLTELLSSDRQEDDGLGYLRLQIN SFLKALITTYNNELIKV
NAIP2 LRPVYRFLGPLEQBFLLAAVRLTELLSSDRQEDDGLGYLRLQIN SFLKAMSIYHTLTKV
NAIP7 LRPVYRFLGPLEQBFLLAAVRLTELLSSDRQEDDGLGYLRLQID SFLKAINSNFIPLIYV

800 810 820 830 840 850
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NAIP6 SSSSSSKKAAPTVVSHELLQLVDEKESLENMSENEDYMKLHQTFLWFQFVRGLWLVSPBSE
NAIP1 FSSPSSKKAAPTIVVSHLLQLVDETELLENNTYKNEDYVNHPTGSTRIMKGLKELWLLSPBY
NAIP2 SSSPSSKKAAPTIVVSHLLQLVDEKESLENMSENEDYMKLHQTFLWFQFVRGLWLVSPBSE
NAIP7 SSSSSSKKAAPTVVSHELLQLVDEKESLENMSENEDYMKLHQTFLWFQFVRGLWLVSPBSE

860 870 880 890 900 910
NAIP5 SSFVSEHLLRLAIFAYESNTVAECSEFIIQLRGRRLALRVLNICYFRDHPBSLLLLRS
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NAIP7 SSFVSEHLLRLAIFAYESNTVAECSEFIIQLRGRRLALRVLNICYFRDHPBSLLLLRS

920 930 940 950 960 970
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NAIP6 LKVSINGNKMSIYWDYS.FKTYENLQPPANEDEYTSAPETHISBWRNFADDEEIKNYE
NAIP1 LEVSIINGNKVPIYWDYSVMEKSEETLQPPITDQDYASAPQMKHEKKNLSENETIKSIK
NAIP2 LKVSINGNKMSIYWDYS.FKTYENLQPPANEDEYTSAPETHISBWRNFADDEEIKNYE
NAIP7 LKVSINGNKMSIYWDYS.FKTYENLQPPANEDEYTSAPETHISBWRNFADDEEIKNYE

980 990 1000 1010 1020 1030
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NAIP6 NIWFRLALPDISEGYWKLSPKPKIPKLEVOVNNMGPADQALLQVLMVFSASQIEFFHIF
NAIP1 NIWFRLALPDISEGYWKLSPKPKIPKLEVOVNTNMGPADQALLQVLMVFSASQIEFFHS
NAIP2 DMKHQIPLNISTGYWKLSPKPKIPKLEVOVNTGADQALLQVLMVFSASQIEFFHIF
NAIP7 NIWFRLALPDISEGYWKLSPKPKIPKLEVOVNNMGPADQALLQVLMVFSASQIEFFHIF

1040 1050 1060 1070 1080 1090
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NAIP6 NSSGFLESIRPALELSKASVTKCSMSRLELSRAEGBLLTLPALQSLVSETNQLPDQLE
NAIP1 DSSGFLESIRPALELSKASVTKCSMSRLELSRAEGBLLTLPALQSLVSETNQLPDQLE
NAIP2 DSSGFLESIRPALELSKASVTKCSMSRLELSRAEGBLLTLPALQSLVSETNQLPDQLE
NAIP7 NSSGFLESIRPALELSKASVTKCSMSRLELSRAEGBLLTLPALQSLVSETNQLPDQLE

1100 1110 1120 1130 1140 1150
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NAIP1 HNLHKFLGLKELCVRLDGKPDVLSVLEGEFFNLHHEKLSIFTSIESDLSKLVKIQNSP
NAIP2 HNLHKFLGLKELCVRLDGKPDVLSVLEGEFFNLHHEKLSIFTSIESDLSKLVKIQNSP
NAIP7 HNLHKFLGLKELCVRLDGKPDVLSVLEEEFNLHHEKLSIFTSIESDLSKLVKIQNFP

1160 1170 1180 1190 1200 1210
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NAIP6 NLHVFHLKCDPLSNCESLMTAVDASCKKLRBIEFSGRCEPAMTFVNIILPNEVSLKIDLSLKD
NAIP1 NLHVFHLKCDPLSNCESLMTAVDASCKKLRBIEFSGRCEPAMTFVNIILPNEVSLKIDLSLKD
NAIP2 NLHVFHLKCDPLSNCESLMTAVDASCKKLRBIEFSGRCEPAMTFVNIILPNEVSLKIDLSLKD
NAIP7 NLHVFHLKCDPLSNCESLMTAVDASCKKLRBIEFSGRCEPAMTFVNIILPNEVSLKIDLSLKG

1220 1230 1240 1250 1260 1270
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NAIP6 QQRFDKETSEKFAQALGSLRNLEELVPTGDGIHOVAKLIVRQCLQPLCLRVLAHDIID
NAIP1 QQRFDKETSEKFAQALGSLRNLEELVPTGDGIHOVAKLIVRQCLQPLCLRVLAHDIID
NAIP2 QQRFDKETSEKFAQALGSLRNLEELVPTGDGIHOVAKLIVRQCLQPLCLRVLAHDIID
NAIP7 QQRFDKETSEKFAQALGSLRNLEELVPTGDGIHOVAKLIVRQCLQPLCLRVLAHDIID

1280 1290 1300 1310 1320 1330
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NAIP6 DESVIEIARAATSGGFQKLENLDISMNHKITEBGGYRNEFFQALDNLPLNQLMNICRNIIPGR
NAIP1 NDSVIEIARVATSGGFQKLEKLDLSMNHKITEBGGYRNEFFQALDNLPLNQLMNICRNIIPGR
NAIP2 DDSVLEIAKGAIRGGFQKLENLDTLTHKITEBGGYRNEFFQALDNLPLNQLMNICRNIIPGR
NAIP7 DESVIEIARAATSGGFQKLENLDISMNHKITEBGGYRNEFFQALDNLPLNQLMNICRNIIPGR

1340 1350 1360 1370 1380 1390
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1400
NAIP5 PPSVILE
NAIP6 PPSVILE
NAIP1 PPSVILE
NAIP2 PPSVILE
NAIP7 PPSVILE
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Supplementary information, Figure S9. Structure-based sequence alignment of mouse NAIPs.

Conserved and similar residues are highlighted in white and red, respectively. The stars indicate FliC_{DO_L}-interacting residues.