

Edited Dlx Alignment

xenopusXdl1MTTMAD GLEAQDSSKS AFMEF.GQQQSHSQQ SSPV.MAAGH
zfishDlx6 ..MMTMTTMAD GLEAQDSSKS AFMEF.GQQ.SHSQQ SSPS.MAASH
mouseDlx6
zfishDlx1 ..MTMSTIPE SLNSPVSGKS VFMEF.GPP.SQQ MSPSSMTHGH
mouseDlx1 ..MTMTTMPE SLNSPVSGKA VFMEF.GPP.NQQ MSPSPMSHGH
zfishDlx7 ..MMSMFMSD TLNSSDPSKS AFLEF.GHGLASNQQ HLSG.FAHNI
zfishDlx8 ..MTMDSLSE SLEASDPSKS AFLEF.SHGYQSHQQ HSPG.VSHAH
mouseDlx5 ..MTG.VFDR RVPSIRSGDF QAPFP.TSA. ...AMHHPSQ ESPT.....
chickDlx5 ..MTA.VFDR RVPGIRSSDF QPPFQ.SAA. ...AMHHPSQ ESPT.....
xenopusDl13 ..MTG.VYER RVASIRASEF QS..... ..MMHHPSQ DSPT.....
zfishDlx4 ..MTG.VFDR RIPSIRKPA DF QNPFQ.LS.. ...TMHHPSQ ESPT.....
zfishDlx2 ..MTG.VFDS LSTDMHSNQI TSSS..YH..SLHKSQ ESPT.....
zfishDlx5 ..MTA.VLDS LGSDMHTNHI TSSS..FS..TVHKSQ DSPT.....
xenopusDl14 ..MTG.VFDS LAADMHSNHM PSSS..YH..SLHKSQ ESPT.....
xenopusDl11 ..MTG.VFDS LAADMHSNHM PSSS..YH..SLHKSQ ESPT.....
mouseDlx2 ..MTG.VFDS LVADMHSTQI TASST.YHQH QONSSLHKPQ ESPT.....
mouseDlx3 ..MSG.SFDR KLSSILTDIS SS..... ..LSCHAGSK DSPT.....
zfishDlx3 ..MSGPTYDR KIPGISTDLS GS..... ..MSCHPTSK DSPT.....
xenopusxdl12GAVLTDLTTSCHPVTK DSPT.....
xenopusDl12 ..MSG..PYE KKMAVLTDLSTSSHVPVK DSPT.....
DeltaMMSAST AATS..... ..MAHHTH HYPH....HC
Alpha ..MTE.VFEC SSADPRPDM KRDDAD.VYGL SHPQHSHSHH HHPQAQSSPT
Gamma ..MTD.VFDC GSADLRPDM KREAD.FYG.LHQAH SSPT.....
Beta
amphiMEIPPVQ QTPVMSM...

xenopusXdl1 YPSLHCLHSG SHHHHQHQHD TN.YSGSNSY SRSLAA.... .. .YPYMSH
zfishDlx6 YP.LHCLHSG SHHH..HQHD SSPYSGSNSY NRSLP..... .. .YSYVSH
mouseDlx6
zfishDlx1 YS.MHCLHSS GHPQ....HD SA.YSPAPSF PRSLP..... .. .YPYVNS
mouseDlx1 YS.MHCLHSA GHSQ....PD GA.YSSASSF SRPLG..... .. .YPYVNS
zfishDlx7 YP.VHGLHSG GHLQ....HD APYPSSAPHY SRPLG..... .. .YAYPGP
zfishDlx8 YP.VHGLHQG AHSQ....YD AAFSPGAASY SRPLA..... .. .YHYS..
mouseDlx5 LPESSTATSD YYSP....AG AAPHGYSPT SASYGKALNPYQYQYH
chickDlx5 LPESSTATSD YYSP....TG AAPHGYSPT SASYGKALNPYQYQY.
xenopusDl13 LPESSTATD SG YYSPG.AAAG HPHHGYCSP SATYGKALNAYQYQYH
zfishDlx4 LPESSTATD SG YYSP....AG GVHHGYCSPN SGTYGKPLNAYQYQYH
zfishDlx2 LPVSTATDSS INNNTT.QQ..CAGSPY GQS..... ..SSYQYQ
zfishDlx5 LPVSTATDSS FFSSS.QTGHCAGTAY AQL..... ..ASYSYH
xenopusDl14 LPVSTATDSS YYTNQ.QQQQ ..HCGAVSPY GQL..... ..GSYQFH
xenopusDl11 LPVSTATDSS YYTNQ.QQQ. ..HCGAGSPY GQL..... ..GSYQFP
mouseDlx2 LPVSTATDSS YYTNQ.QHPA GGGGGASPY AHM..... ..GSYQYH
mouseDlx3 LPESSTATDMG YYSAP..... QHDYYSGOPY GQTVNPTY. ...HHQFNLN
zfishDlx3 LPESSTATDMG YYSS..... HHEYYSPPY PQQMNSY... ..HQFNLS
xenopusxdl12 LPESSTATDMG YYSGH.LSAG QHDFPPTQTY SPSISSYGYP HP...QYNFN
xenopusDl12 LPESSTATDMG YYNGH.LSTG QHDFFTQAY SPTISSYGYP HPPHPQYNFN
Delta LP.SAGHDSS YAAAA..AAA AAAAAASYQ SRPLG..... ..YPYLN
Alpha LPESSTATD SG CYHHP..SPS SAYQAYGPYC PPAVAAYNQ PLSPYAHQL
Gamma LPESSTATDSS MSYYP..SPP SAYAGYSYC APAYGQQQQ PLNHYPYQLP
BetaQ HQQQHQQQ QQQLS..... ..AYYAA
amphi MNHSSYPVRC LHPTS.HTQH ESAFSTAAPH SRPLG..... ..YPFSMN

xenopusXd11	S.H..SPYL. ....TTV	IENGEIR.FN	GKGKKIRKPR	TIYSSLQLQA
zfishDlx6	P.H..SPYL. ....TTV	IENGEIR.FN	GKGKKIRKPR	TIYSSLQLQA
mouseDlx6	.....TTV	IENGEIR.FN	GKGKKIRKPR	TIYSSLQLQA
zfishDlx1	VGHSSSPYLS TV.....NTV	VEGGEVR.FN	GKGKKIRKPR	TIYSSLQLQA
mouseDlx1	VSHASSPYIS SV.....STV	VEGGEVR.FN	GKGKKIRKPR	TIYSSLQLQA
zfishDlx7	VSAAPGAYMP .Y.....PAV	IENGEIR.LN	GKGKKIRKPR	TIYSSVQLQA
zfishDlx8	TAHHPGAYLP .Y.....QSS	IESGEIR.LN	GKGKKIRKPR	TIYSSLQLQA
mouseDlx5	GVGSAAGYPA KAYADYGEKE	VAEPEVRMVN	GKPKKVRKPR	TIYSSFQLAA
chickDlx5	GMGSAGTYPA KAYADYGEKE	VAEPEVRMVN	GKPKKVRKPR	TIYSSFQLAA
xenopusD113	GMGAAANYSG KAYS DYGEKE	VSEPEVRMVN	GKPKKIRKPR	TIYSSFQLAA
zfishDlx4	GVSSGNYSYSA KSYDPYGEKE	TAEPEVRMVN	GKPKKVRKPR	TIYSSFQLAA
zfishDlx2	NNMNSVQYNT KS.YELGEKE	EREPEIRMVN	GKPKKVRKPR	TIYSTFQLAA
zfishDlx5	PGVGNVHYSP KA.YDLGEKE	ESEPEVRMVN	GKPKKVRKPR	TIYSSFQLAA
xenopusD114	GAINGISYST KS.YDLSEKE	DCEPEVRMVN	GKPKKVRKPR	TIYSSFQLAA
xenopusD111	G.INGISYST KS.YDLSEKE	ECEPEVRMVN	GKPKKVRKPR	TIYSSFQMAA
mouseDlx2	ASLNNVSYSA KSSYDLGDKE	DLEPEIRIVN	GKPKKVRKPR	TIYSSFQLAA
mouseDlx3	GLGT.GAYSP KSEYTYGVKE	EPEAEVRMVN	GKPKKVRKPR	TIYSSYQLAA
zfishDlx3	GMATPGAYPT KTEYPYNVKE	EPETEVRMVN	GKPKKIRKPR	TIYSSYQLAA
xenopusxld112	GLGN.EGYLS KDDYQYGVKE	EPETEVRMVN	GKPKKIRKPR	TIYSSYQLAA
xenopusD112	GLGN.ESFLP KDDYQY.VKE	EPETEVRMVN	GKPKKIRKPR	TIYSSYQLAA
Delta	IGGTGGASGG YSLGALPTPV	IHNCEL.R.FN	GKGKKIRKPR	TIYSSLQLQA
Alpha	GRYGAAGYGP GATGGAAEEEE	SRQSGVRMVN	GKPKKIRKPR	TIYSSFQLAA
Gamma	LQDKSYHQGY HQYGVFGEEA	SRESGVRMVN	GKPKKIRKPR	TIYSSFQLAA
Beta	AEALDAPYDA KERGDYDPKD	DSEPEARLVN	GKPKKVRKPR	TIYSSFQLAA
amphi	PMPYGNPYST AAVTP..TDK	SPDPTDQRIN	GKGKKMRKPR	TIYTSFQLQQ

xenopusXd11	LNHRFQQTQY LALPERAELA	ASLGVTTQTV	KIWFQNKRSK	YKKLIKQGNM
zfishDlx6	LNHRFQQTQY LALPERAELA	ASLGLTQTV	KIWFQNKRSK	FKKLLKQGGN
mouseDlx6	LNHRFQQTQY LALPERAELA	ASLGLTQTV	KIWFQNKRSK	FKKLLKQGSN
zfishDlx1	LNRRFQQTQY LALPER.ELA	ASLGLTQTV	KIWFQNKRSK	FKKLMKQGGG
mouseDlx1	LNRRFQQTQY LALPERAELA	ASLGLTQTV	KIWFQNKRSK	FKKLMKQGGG
zfishDlx7	LHQRFQQTQY LALPERADLA	AKLGLTQTV	KIWFQNKRSK	YKKIMKHGSS
zfishDlx8	LNQRFQQTQY LALPERADLA	AKLGLTQTV	KIWFQNKRSK	YKKIMKHGSS
mouseDlx5	LQRRFQKTQY LALPERAELA	ASLGLTQTV	KIWFQNKRSK	IKKIMKNGEM
chickDlx5	LQRRFQKTQY LALPERAELA	ASLGLTQTV	KIWFQNKRSK	IKKIMKNGEM
xenopusD113	LQRRFQKTQY LALPERAELA	ASLGLTQTV	KIWFQNKRSK	IKKIMKNGEL
zfishDlx4	LQRRFQNTQY LALPERAELA	ASLGLTQTV	KIWFQNKRSK	LKKIMKNGEL
zfishDlx2	LQRRFQKTQY LALPERAELA	ASLGLTQTV	KIWFQNRRSK	FKKLWKSGEI
zfishDlx5	LQRRFQKTQY LALPERAELA	ASLGLTQTV	KIWFQNRRSK	FKKLWKNGEI
xenopusD114	LQRRFQKTQY LALPERAELA	ASLGVTTQTV	KIWFQNRRSK	FKKMWKSGEI
xenopusD111	LQRRFQKTQY LALPERAELA	ASLGLTQTV	KIWFQNRRSK	FKKMWKNGEM
mouseDlx2	LQRRFQKTQY LALPERAELA	ASLGLTQTV	KIWFQNRRSK	FKKMWKSGEI
mouseDlx3	LQRRFQKAQY LALPERAELA	AQLGLTQTV	KIWFQNRRSK	FKKLYKNGEV
zfishDlx3	LQRRFQKAQY LALPERAELA	AQLGLTQTV	KIWFQNRRSK	FKKLYKNGEV
xenopusxld112	LQRRFQKAQY LALPERAELA	AQLGLTQTV	KIWNQNRRSK	FKKIYKNGEG
xenopusD112	LQRRFQKAQY LALPERAELA	AQLGLTQTV	KIWFQNRRSK	FKKLYKNGEG
Delta	LNRRFQQTQY LALPERAELA	ASLGLTQTV	KIWFQNKRSK	YKKLMKAGGA
Alpha	LQRRFQQTQY LALPERAELA	ASLGLTQTV	KIWFQNRRSK	FKKLGKNGEM
Gamma	LQRRFQQTQY LALPERAELA	ASLGVTTQTV	KIWFQNRRSK	FKKIGKHGEM
Beta	LQRRFERTQY LALPERAELA	ASLGLTQTV	KIWFQNRRSK	FKRLVKSSEL
amphi	LNRRFQRTQY LALPERAELA	AQLGLTQTV	KIWFQNRRSK	YKKLMKQGGG

xenopusXdll	PL..EIDQLA	GTVALS.PRS	PAIPP.VWDV	S.ASYMFGYS	HWYSSPH...
zfishDlx6	PH..ETDTLP	GSIALS.PRS	PAIPP.IWDV	S.ASYMFGYS	HWYSSPH...
mouseDlx6	PH..ESDPLP	GSAALS.PRS	PALPP.VWDV	S.ASYMFGYS	HWYSSPH...
zfishDlx1	TI..DTNALA	NGRGLS.TGS	PSVAP.VWN.	..TTYIPSYT	SWYPTAH...
mouseDlx1	AL..EGSALA	NGRAL.S.AGS	PPVPP.GWNP	NSSSYVPSYT	SWYPSAH...
zfishDlx7	GP..EGELLH	TSSSS..PCS	PGLSQ.LWEV	SMANYMNNYG	HWYPPHH...
zfishDlx8	GP..EGEHLQ	AASASGAPCS	PGMPP.LWDV	SMPSYMNSFG	HWYSGHH...
mouseDlx5	P...PEHSPS	SSDPMA.CNS	PQSPA.VWEP	QGSSYLENSA	.SWYPSA.AS
chickDlx5	P...PEHSPS	SSDPMA.CNS	PQSPA.VWEP	QGSSYLESPS	.AWYP.A.AS
xenopusDll3	P...PEHSPS	SSDPMA.CNS	PQSPV.VWEP	QGSSYLENSG	.VWYP...TG
zfishDlx4	P...PEHSPS	SSDPMA.CNS	PQSPA.VWDS	QGPQFLEMRE	.LFVVFLYRG
zfishDlx2	P...PEQHVA	SGESPP.HPS	PPLAA.AWDF	AHSQFLTNY	.WYSSTN...
zfishDlx5	P...ADQQVA	SGDSP..SSS	PPPQA.GWDF	PPNPFLTNY	.WYSSTN...
xenopusDll4	P...SDQLPV	GSESSP.CSS	PSAST.TWDF	GPHQFLSNYS	.WYQTSN...
xenopusDll1	P...SDQLPV	GSESSP.CSS	PPAST.TWDF	GQHQFLGNYS	.WYQTSN...
mouseDlx2	P...TEQHPG	ASASPP.CAS	PPVSA.SWDF	GAPQFLGNYP	.WYHQAS...
mouseDlx3	P...LEHSPN	NSDSMA.CNS	PPSPA.LWDT	SSHSYLDIPT	SWYHTQN...
zfishDlx3	P...LEHSPN	ASDSMA.CNS	PPSPA.VWDN	NAHSYMEDYS	HWYQ.Q....
xenopusxldll2	PG..LEHSPN	NSDSMA.CNS	PSSPP.IWDN	SRSRYLENYH	PWYTQQN...
xenopusDll2	PD..MEHSPN	NSDSMA.CNS	PSSPP.IWDN	SGSRYLENYH	SWYTQQN...
Delta	GL..ENNPLV	NTGCLPPSPV	SGHPQ.VWDM	GPPAYMPPYS	HWYSPSAH..
Alpha	AP..AQASPS	SSDPMA.CNS	PASPG.HQQL	GSA AHL PQHP	PWYLQHQHQ
Gamma	MPTPAQASPA	SSDPMA.CDS	PPSPG.LAPS	STTGQHQHQ	QQHQHQHQHQ
Beta	G...SEHSPG	ASDSMT.CDS	PPSPADAIPH	GAPALMQVHV	SSLSSSSSSS
amphi	PP.PAVGTPN	SSAPNPVQQQ	SGQPGHASPP	GAPTWAAATC	TRMGRQQYQS

xenopusXdll	..QDTMQRSQ	MM.....	.....	.....	.....
zfishDlx6	..QDAMQR..	.....	.....	.....	.....
mouseDlx6	..QDTMQRPQ	MM.....	.....	.....	.....
zfishDlx1	..QDTMQQPQ	LM.....	.....	.....	.....
mouseDlx1	..QEAMQQPQ	LM.....	.....	.....	.....
zfishDlx7	..QDPVPRPQ	MM.....	.....	.....	.....
zfishDlx8	..QDPMARTQ	MM.....	.....	.....	.....
mouseDlx5	S.INSHLPPP	GSLQ.....	.....HP..	.....LALAS	GTLY
chickDlx5	P.LGSHLQPH	GSLQ.....	.....HP..	.....LALPS	GTIY
xenopusDll3	T.HLQNLQNH	ASLQ.....	.....HP..	.....LALAS	GTLY
zfishDlx4	D.EFFTLQAP	GTL.....	.....HS..	.....LALGS	GTLY
zfishDlx2	..SAAHLQP.	.....	.....PLHHN.	..T..T.VSA	GTIF
zfishDlx5	..AVTHLQPS	.TLI.....	.....QPHHS.	..S..A.MST	GTIF
xenopusDll4	..SAPHLQSN	.PLLQ.....	.....QHHLHH	HPP..APISA	GTIF
xenopusDll1	..PAPHLQSN	.SLLQ.....	.....QHQLHH	HP....VSA	GTIY
mouseDlx2	.GSASHLQAT	APLLHPSQTP	QAHHHHHHHH	HAGGGAPVSA	GTIF
mouseDlx3	.LSGPHLQQQ	PPQPAT....	.....LHHAS.	...PGPPP	GAVY
zfishDlx3	...GSHLQH.	P.....	.....VHH...	...PGPPQSV	GAVY
xenopusxldll2	.QPGQHLQPS	E.....	.....VMHQ..	.....PPP.	.TVY
xenopusDll2	.QSGQHLQPS	E.....	.....VMHQ..	.....PPP.	.TVY
Delta	.QESMANQPV	M.....	.....	.....	.....
Alpha	QHQQQQQQQQ	QQQQQQQSGG	PTAFRHSPPS	LLALAQPECK	WRHF
Gamma	QQQQQLHAQYP	PVGPWFGGHS	HLQGPSTYGQ	QQTTPPLLHA	PHID
Beta	SSSSSSSSST	YQPWYRPPHD	STFAPPSSTA	VAAAMQPLCG	GAAV
amphi	HGELHELSP	LPLSMALPGT	AAAIPTTPNI	EQYVLPPVNF	LQRL