

Figure S4

A

MGAIGLLWLL PLLLSTAAVG SGMGTGQRAG SPAAGPPIQP REPLSYSRLQ RKSLAVDFVV
 PSXXXXXXXXD LLLPPSSSEL KAGRPEARGS LALDCAPLIR LLGPAPGVSW TAGSPAPAEA
 RTLSRVLKGG SVRKLRRRAKQ LVLELGEEAI LEGCVGPPGE AAVGLLQFNL SELFSWWIRQ
 GEGRLRIRLM PEKKASEVGR EGRLSAAIRA SQPRLLFQIF GTGHSSLESPTNMPSPSPDY
 FTWNLTWIMK DSFPFLSHRS RYGLECSFDF PCELEYSPL HDLRNQSWSW RRIPSEEASQ
 MDLLDGPAGE RSKEMPRGSF LLLNTSADSK HTILSPWMRS SSEHCTLAVS VHRHLQPSGR
 YIAQLPHNE AAREIILMPT PGKHGWTVLQ GRIGRPDNP RVALEYISSG NRSLSAVDFF
 ALKNCSEGTS PGSKMALQSS FTCWNGTVLQ LGQACDFHQD CAQGEDESQM CRKLPVGFYC
 NFEDGFCGWT QGTLSPHTPQ WQVRTLKDAR FQDHQDHALL LSTTDVPASE SATVTSATFP
 APIKSSPCEL RMSWLIRGVL RGNVSLVIVE NKTGKEQGRM VWHVAAYEGL SLWQWMVLPL
 LDVSDRFLWQ MVAWWGQGSR AIVAFDNISI SLDCYLITISG EDKILQNTAP KSRNLFERNP
 NKEKLPGENS PRQTPIFDPT VHWLFTTCGA SGPHGPTQAQ CNNAYQNSNL SVEVGSEGPL
 KGIQWVKVPA TDTYISGYG AAGGKGKNT MMRSHGVSVL GIFNLEKDDM LYILVGQQGE
 DACPSTNQLI QKVCIGENNV IEEIIRVNRS VHEWAGGGGG GGGATYVFKM KDGVPVPLII
 AAGGGGRAYG AKTDTFHPER LENNSSVLGL NGNSGAAGGG GGWNDNTSLL WAGKSLQEGA
 TGGHSCPQAM KKWGWETRGG FGGGGGCGSS GGGGGGYIGG NAASNNDPEM DGEDGVSFIS
 PLGILYTPAL KVMEGHGEVN IKHYLNCSC EVDECHMDPE SHKVICFCDH GTVLAEDGVS
 CIVSPTPEPH LPLSLILSVV TSALVAALVL AFSGIMIVYR RKHQELQAMQ MELQSPPEYKL
 SKLRTSTIMT DYNPNYCFAG KTSSISDLKE VPRKNITLIR GLGHGAFGEV YEGQVSGMPN
 DPSPLQVAVK TLPEVCSEQD ELDFLMEALI ISKFHNQNI RCIGVSLQSL PRFILLELMA
 GGDLSLFLRE TRPRPSQPSS LAMLDLLHVA RDIACGCQYL EENHFIHRI AARNCLLTCP
 GPGRVAKIGD FGMARDIYRA SYRKGKGCAM LPVKWMPPEA FMEGIFTSKT DTWSFGVLLW
 EIFSLGYMPY PSKSNQEVLE FVTSGGRMDP PKNCPGPVYR IMTQCWQHQP EDRPNFAILL
 ERIEYCTQDP DVINTALPIE YGPLVEEEEK VVPRPKDPEG VPPLLVSQQA KREEERSPAA
 PPPLPTSSG KAAKPTAAE ISVRVPRGPA VEGGHVNMAF SQSNPPSELH KVHGSRNKPT
 SLWNPTYGSW FTEKPTKKN PIKKEPHDR GNGLGEGSCT VPPNVATGRL PGASLLLEPS
 SLTANMKEVP LFLRLHFPCG NVNYGYQQQG LPLEAATAPG AGHYEDTILK SKNSMNQPGP

B

MGAIGLLWLL PLLLSTAAVG SGMGTGQRAG SPAAGPPIQP REPLSYSRLQ RKSLAVDFVV
 PSXXXXXXXXD LLLPPSSSEL KAGRPEARGS LALDCAPLIR LLGPAPGVSW TAGSPAPAEA
 RTLSRVLKGG SVRKLRRRAKQ LVLELGEEAI LEGCVGPPGE AAVGLLQFNL SELFSWWIRQ
 GEGRLRIRLM PEKKASEVGR EGRLSAAIRA SQPRLLFQIF GTGHSSLESPTNMPSPSPDY
 FTWNLTWIMK DSFPFLSHRS RYGLECSFDF PCELEYSPL HDLRNQSWSW RRIPSEEASQ
 MDLLDGPAGE RSKEMPRGSF LLLNTSADSK HTILSPWMRS SSEHCTLAVS VHRHLQPSGR
 YIAQLPHNE AAREIILMPT PGKHGWTVLQ GRIGRPDNP RVALEYISSG NRSLSAVDFF
 ALKNCSEGTS PGSKMALQSS FTCWNGTVLQ LGQACDFHQD CAQGEDESQM CRKLPVGFYC
 NFEDGFCGWT QGTLSPHTPQ WQVRTLKDAR FQDHQDHALL LSTTDVPASE SATVTSATFP
 APIKSSPCEL RMSWLIRGVL RGNVSLVIVE NKTGKEQGRM VWHVAAYEGL SLWQWMVLPL
 LDVSDRFLWQ MVAWWGQGSR AIVAFDNISI SLDCYLITISG EDKILQNTAP KSRNLFERNP
 NKEKLPGENS PRQTPIFDPT VHWLFTTCGA SGPHGPTQAQ CNNAYQNSNL SVEVGSEGPL
 KGIQWVKVPA TDTYISGYG AAGGKGKNT MMRSHGVSVL GIFNLEKDDM LYILVGQQGE
 DACPSTNQLI QKVCIGENNV IEEIIRVNRS VHEWAGGGGG GGGATYVFKM KDGVPVPLII
 AAGGGGRAYG AKTDTFHPER LENNSSVLGL NGNSGAAGGG GGWNDNTSLL WAGKSLQEGA
 TGGHSCPQAM KKWGWETRGG FGGGGGCGSS GGGGGGYIGG NAASNNDPEM DGEDGVSFIS
 PLGILYTPAL KVMEGHGEVN IKHYLNCSC EVDECHMDPE SHKVICFCDH GTVLAEDGVS
 CIVSPTPEPH LPLSLILSVV TSALVAALVL AFSGIMIVYR RKHQELQAMQ MELQSPPEYKL
 SKLRTSTIMT DYNPNYCFAG KTSSISDLKE VPRKNITLIR GLGHGAFGEV YEGQVSGMPN
 DPSPLQVAVK TLPEVCSEQD ELDFLMEALI ISKFHNQNI RCIGVSLQSL PRFILLELMA
 GGDLSLFLRE TRPRPSQPSS LAMLDLLHVA RDIACGCQYL EENHFIHRI AARNCLLTCP
 GPGRVAKIGD FGMARDIYRA SYRKGKGCAM LPVKWMPPEA FMEGIFTSKT DTWSFGVLLW
 EIFSLGYMPY PSKSNQEVLE FVTSGGRMDP PKNCPGPVYR IMTQCWQHQP EDRPNFAILL
 ERIEYCTQDP DVINTALPIE YGPLVEEEEK VVPRPKDPEG VPPLLVSQQA KREEERSPAA
 PPPLPTSSG KAAKPTAAE ISVRVPRGPA VEGGHVNMAF SQSNPPSELH KVHGSRNKPT
 SLWNPTYGSW FTEKPTKKN PIKKEPHDR GNGLGEGSCT VPPNVATGRL PGASLLLEPS
 SLTANMKEVP LFLRLHFPCG NVNYGYQQQG LPLEAATAPG AGHYEDTILK SKNSMNQPGP

Fig. S4. ALK consensus sequence in which the highlighted peptides in yellow are the ones detected by MS after in-gel digestion. **(A)** Peptides identified in the upper band of the ALK IP (higher molecular weight); **(B)** Peptides identified in the lower band of the IP. Blue highlighting indicates alternating exons; Red highlighting indicates amino acids encoded across a splice junction.