Additional file 4

(a)

1   51   98 110 134   193   282   299   399   451   500

DI | DII | FL | DII | DI | DII | DI | DIII | ST | TM

(b)

```
KC526872/IND/11/WB/JEV45  FHCLGMGNRDFIEGASGATWVDLVLEGDSCLTIMANDKPTLDVRMINIEASQLAEVRSYC  60
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KC526869/IND/11/WB/JEV46  FHCLGMGNRDFIEGASGATWVDLVLEGDSCLTIMANDKPTLDVRMINIEASQLAEVRSYC  60
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KC526870/IND/11/WB/JEV47  FHCLGMGHRDFIEGASGATWVDLVLEGDSCLTIMANDKPTLDVRMINIEASQLAEVRSYC  60
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KC526871/IND/12/WB/JEV50  FHCLGMGNRDFIEGASGATWVDLVLEGDSCLTIMANDKPTLDVRMINIEASQLAEVRSYC  60
                          CCCCCCCCEEEEECCCCCCEEEEEEECCCEEEEEECCCCEEEEEEEEEEEECCEEEEEEE

        D90195/SA14-14-2  FNCLGMGNRDFIEGASGATWVDLVLEGDSCLTIMANDKPTLDVRMINIEASQLAEVRSYC  60
                          CCCCCCCCEEEEECCCCCCEEEEEEECCCEEEEEECCCCEEEEEEEEEEEECCEEEEEEE

                                   .                                  .      *
KC526872/IND/11/WB/JEV45  YHASVTDISTVARCPTTGEAHNEKRADSSYVCKQGFTDRGWGKGCGLFGKGSIDTCAKFS  120
                          EEEEEEEEEEEECCCCCCCCCHHHHCCCEEEEEEEEEECHHHCCCCEEEEEEEEEEEE

KC526869/IND/11/WB/JEV46  YHASVTDISTVARCPTTGEAHNEKRADSSYVCKQGFTDRGWGNGCGLFGKGSIDTCAKFS  120
                          EEEEEEEEEEEECCCCCCCCCHHHHCCCEEEEEEEEEECHHHCCCCEEEEEEEEEEEE

KC526870/IND/11/WB/JEV47  YHATVTDISTVARCPTTGEAHNEKRADSSYVCKQGFTDRGWGNGCGLFGKGSIDTCAKFS  120
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KC526871/IND/12/WB/JEV50  YHASVTDISTVARCPTTGEAHNEKRADSSYVCKQGFTDRGWGNGCGLFGKGSIDTCAKFS  120
                          EEEEEEEEEEEECCCCCCCCCHHHHCCCEEEEEEEEEECHHHCCCCEEEEEEEEEEEE

        D90195/SA14-14-2  YHASVTDISTVARCPTTGEAHNEKRADSSYVCKQGFTDRGWGNGCGFFGKGSIDTCAKFS  120
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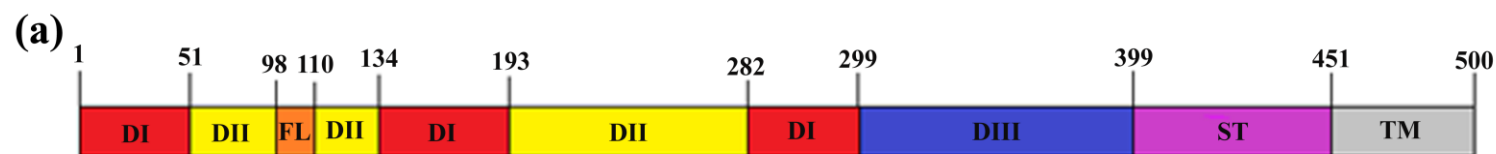
Glycosylation site

<pre>
KC526872/IND/11/WB/JEV45 CTSKAIGRTIQPENIKYEVGIFVHGTTTSENHGNYSAQVGASQAAKFTVTPNAPSITLKL 180
                          EEEEEEEEECCHHHEEEEEEEEECCCCCCCCCCCHHHHHCCCCEEEEECCCCCEEEEEE

KC526869/IND/11/WB/JEV46 CTSKAIGRTIQPENIKYEVGIFVHGTTTSENHGNYSAQVGASQAAKFTVTPNAPSITLKL 180
                          EEEEEEEEECCHHHEEEEEEEEECCCCCCCCCCCHHHHHCCCCEEEEECCCCCEEEEEE

KC526870/IND/11/WB/JEV47 CTRKAIGRTIQPENIKYEVGIFVHGTTTSENHGNYSAQVGASQAAKFTVTPNAPSITLKL 180
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KC526871/IND/12/WB/JEV50 CTSKAIGRTIQPENIKYEVGIFVHGTTTSENHGNYSAPVGASQAAKFTVTPNAPSITLKL 180
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          D90195/SA14-14-2 CTSKAIGRTIQPENIKYKVGIFVHGTTTSENHGNYSAQVGASQAAKFTVTPNAPSVALKL 180
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KC526872/IND/11/WB/JEV45 GDYGEVTLDCEPRSGLNTEAFYVMTVGSKSFLVHREWFHDLSLPWTSPSSTAWRNRELLM 240
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KC526869/IND/11/WB/JEV46 GDYGEVTLDCEPRSGLNTEAFYVMTVGSKSFLVHREWFHDLALPWTSPSSTAWRNRELLM 240
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KC526870/IND/11/WB/JEV47 GDYGEVTLDCEPRSGLNTEAFYVMTVGSKSFLVHREWFHDLALPWTSPSSTAWRNRELLM 240
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KC526871/IND/12/WB/JEV50 GDYGEVTLDCEPRSGLNTEAFYVMTVGSKSFLVHREWFHDLALPWTSPSSTAWRNRELLM 240
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          D90195/SA14-14-2 GDYGEVTLDCEPRSGLNTEAFYVMTVGSKSFLVHREWFHDLALPWTSPSSTAWRNRELLM 240
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KC526872/IND/11/WB/JEV45 EFEEAHATKQSVVALGSQEGSLHQALAGAIVVEYSSSVKLTSGHLKCRLKMDKLALKGT 300
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KC526869/IND/11/WB/JEV46 EFEEAHATKQSVVALGSQEGSLHQALAGAIVVEYSSSVKLTSGHLKCRLKMDKLALKGT 300
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KC526870/IND/11/WB/JEV47 EFEEAHATKQSVVALGSQEGSLHQALAGAIVVEYSSSVKLTSGHLKCRLKMDKLALKGT 300
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KC526871/IND/12/WB/JEV50 EFEEAHATKQSVVALGSQEGSLHHALAGAIVVEYSSSVKLTSGHLKCRLKMDKLALKGT 300
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                              *          .     .              .  .  .
KC526872/IND/11/WB/JEV45   YGMCTEKFSFAKNPADTGHGTVVIELTYSGSDGPCKIPIVSVASLNDMTPVGRLVTVNPF   360
                           CCECCCCEEEEEEEEECCCCEEEEEEECCCCCEECCEEEEECCCCCCCCCEECCCCCE

KC526869/IND/11/WB/JEV46   YGMCTGKFSFRKNPADTGHGTVVIELTTGSDGPCKIPIVSVASLNDMTPVGRLVTVNPF   360
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KC526870/IND/11/WB/JEV47   YGMCTGKFSFAKNPADTGHGTVVIELQYTKDGPCKIPIVSVASLNDMTPVGRLVTVNPF   360
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KC526871/IND/12/WB/JEV50   YGMCTEKFSFAKNPVDTGHGTVVIELSYSGSDGPCKIPIVSVASLNDMTPVGRLVTVNPF   360
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       D90195/SA14-14-2    YGMCTEKFSFAKNPVDTGHGTVVIELSYSGSDGPCKIPIVSVASLNDMTPVGRLVTVNPF   360
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                                .                              .  .
KC526872/IND/11/WB/JEV45   VATSSANSKVLLEIEPPFGDSYIVVGRKDKQINHHRHKAGSTLGKAFSTTLKGAQRLAAL   420
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KC526869/IND/11/WB/JEV46   VATSSSNSKVLVEMTPPFGDSYIVVGRGDKQINHHWHKAGSTLGKAFSTTLKGAQRLAAL   420
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KC526870/IND/11/WB/JEV47   VATSSSNSKVLVEMTPPFGDSYIVVGREDKQINHHWHKAGSTLGKAFSTTLKGAQKLAAL   420
                           ECCCCCCCEEEEEEECCCEEEEEEECCCCCEEEEEEECCCCHHHHHHHHHHHHHHHHHC

KC526871/IND/12/WB/JEV50   VATSSANSKVLVEMTPPFGDSYIVVGRGDKQINHHWHKAGSTLGKAFSTTLKGAQKLAAL   420
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       D90195/SA14-14-2    VATSSANSKVLVEMTPPFGDSYIVVGRGDKQINHHWHKAGSTLGKAFSTTLKGAQRLAAL   420
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KC526872/IND/11/WB/JEV45   GDTAWDFGSIGGVFNSIGKAVHQVFGGAFRTLFGGMSWITQGLMGALLLWMGVNARDRSI   480
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KC526869/IND/11/WB/JEV46   GDTAWDFGSIGGVFNSIGKAVHQVFGGAFRTLFGGMSWITQGRMGALLLWMGVNARDRSI   480
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KC526870/IND/11/WB/JEV47   GDTAWDFGSIGRVFNSIGKAVHQVFGGAFRTLFGGMSWITQGLMGAELLWMGVNARDRSI   480
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KC526871/IND/12/WB/JEV50   GDTAWDFGSIGGVFNSIGRAVHQVFGGAFRTLFGGMSWITQGLMGALLLWMGVNARDRSI   480
                           CCCCECCCCCCHHHHHHHHHHHHHHHHHHHHCCCCHHHHHHHHHHHHHCCCCCCCCCC

       D90195/SA14-14-2    GDTAWDFGSIGGVFNSIGRAVHQVFGGAFRTLFGGMSWITQGLMGALLLWMGVNARDRSI   480
                           CCCCECCCCCCHHHHHHHHHHHHHHHHHHHHCCCCHHHHHHHHHHHHHCCCCCCCCCC
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KC526872/IND/11/WB/JEV45  ALAFLATGGVLVFLATNVHA  500
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KC526869/IND/11/WB/JEV46  ALAFLATGGVLVFLATNVHA  500
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KC526870/IND/11/WB/JEV47  DLAFLATGGVLVFLATNVHA  500
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KC526871/IND/11/WB/JEV50  ALAFLATGGVLVFLATNVHA  500
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