

LPS CLONE-HF674720: IGKV2-30*01(-3) REPLACED BY IGKV2-24*01 / 6N / (-9) IGKJ5*01

Alignment with FR-IMGT and CDR-IMGT delimitations

```
----- FR2-IMGT ----->_____ CDR
697      HF674720      TGGCTTCAGCAGAGGCCAGGCCAGCCTCCAAGACTCCTAATTTATAAGATT.....
X1268    HOMSAP IGKV2-24*01 F  [red bar].....
FM164408 HOMSAP IGKV2-30*01 [F] ---T-----AT-----G-G-----G-----
```

```
2-IMGT _____<-----
697      HF674720      .....TCTAACCGGTTCTCTGGGGTCCCA...GACAGATTCAGCGGCAGTGGG
X1268    HOMSAP IGKV2-24*01 F  [red bar].....T-----
FM164408 HOMSAP IGKV2-30*01 [F] .....GA[green bar].....
```

```
----- FR3-IMGT -----
697      HF674720      .....TCAGGCACTGATTTACACTGAAAATCAGCAGGGTGGAGGCTGAGGATGTTGGG
X1268    HOMSAP IGKV2-24*01 F  .....G---G---A-----A-----C---
FM164408 HOMSAP IGKV2-30*01 [F] .....[green bar]-----
```

```
----->_____ CDR3-IMGT _____
697      HF674720      GTTTATTACTGCATGCAAGGTACACACTGGCCCCCTCCCGGCCAAGGGACACGACTGGAG
X1268    HOMSAP IGKV2-24*01 F  -----C-----A-TT--T-A.....
FM164408 HOMSAP IGKV2-30*01 [F] [green bar]T-----
J00242   HOMSAP IGKJ5*01 F  .....GAT-A-CTT-----
```

LPS CLONE-HF674721: IGKV2-29*01(-6) REPLACED BY IGKV2-24*01 / 3N / (0) IGKJ5*01

Alignment with FR-IMGT and CDR-IMGT delimitations

```
----- FR2-IMGT ----->_____ CDR
697      HF674721      TGGCTTCAGCAGAGGCCAGGCCAGCCTCCAAGACTCCTAATTTATAAGATT.....
X12684 HOMSAP IGKV2-24*01 F [redacted].....
X63396 HOMSAP IGKV2-29*01 P ---TAC-T----A-----T-----CAG-----G--C--G-AG--.....
```

```
2-IMGT _____<-----
697      HF674721      .....TCTAACCGGTTCTCTGGGGTCCCA...GACAGATTCAGTGGCAGTGGG
X12684 HOMSAP IGKV2-24*01 F [redacted].....
X63396 HOMSAP IGKV2-29*01 P .....--C-G-----A-----...--T--G-----C---
```

```
----- FR3-IMGT -----
697      HF674721      .....GCAAGGGACAGATTTACACTGAAAATCAGCCGGGTGGAGGCTGAGGATGTTGGG
X12684 HOMSAP IGKV2-24*01 F [redacted]A-----A-----C---
X63396 HOMSAP IGKV2-29*01 P [redacted]T-----
```

```
----->_____ CDR3-IMGT _____
697      HF674721      GTTTATTACTGAATGCAAGGTATACACCTCCCGATCACCTTCGGCCAAGGGACACGACTG
X12684 HOMSAP IGKV2-24*01 F -----C-----C--C--AT-T--TCA.....
X63396 HOMSAP IGKV2-29*01 P [redacted]T---C.....
J00242 HOMSAP IGKJ5*01 F [redacted]-----
```

IL1 CLONE-HF674722: IGKV2-24*01(-3) REPLACED BY IGKV2-30*01 / 6N / (-11) IGKJ5*01

Alignment with FR-IMGT and CDR-IMGT delimitations

```
- FR1-IMGT ----->_____ CDR1-IMGT _____<-----
697      HF674722      ATCTCCTGCAGGTCTAGTCAAAGCCTCGTATACAGT...GATGGAAACACCTACTTGAAT
X63403   HOMSAP  IGKV2-30*01 F      -----
FM164408 HOMSAP  IGKV2-30*02 [F]    -----C-----
X12684   HOMSAP  IGKV2-24*01 F      -----C-----G-----

----- FR2-IMGT ----->_____ CDR
697      HF674722      TGGTTTCAGCAGAGGCCAGGCCAATCTCCAAGGCGCCTAATTTATAAGGTT.....
X63403   HOMSAP  IGKV2-30*01 F      -----
FM164408 HOMSAP  IGKV2-30*02 [F]    -----
X12684   HOMSAP  IGKV2-24*01 F      ---C-----GC-----A-T-----A-----

2-IMGT _____<-----
697      HF674722      .....TCTAACCGGGACTCTGGGGTCCCA...GACAGATTCAGCGGCAGTGGG
X63403   HOMSAP  IGKV2-30*01 F      .....
FM164408 HOMSAP  IGKV2-30*02 [F]    .....
X12684   HOMSAP  IGKV2-24*01 F      .....-TT-----T-----

----- FR3-IMGT -----
697      HF674722      .....TCAGGCACTGATTTACACTGAAAATCAGCAGGGTGGAGGCTGAGGATGTCGGG
X63403   HOMSAP  IGKV2-30*01 F      .....T-----
FM164408 HOMSAP  IGKV2-30*02 [F]    .....T-----
X12684   HOMSAP  IGKV2-24*01 F      .....G---G---A-----A-----

----->_____ CDR3-IMGT _____
697      HF674722      GTTTATTACTGCATGCAAGCTACACAATTTCCCCTTAAGCCAAGGGACACGACTGGAGAT
X63403   HOMSAP  IGKV2-30*01 F      -----G-----C-GG--T-C.....
FM164408 HOMSAP  IGKV2-30*02 [F]    -----G-----C-GG--T-C.....
X12684   HOMSAP  IGKV2-24*01 F      -----T-A.....
J00242   HOMSAP  IGKJ5*01 F      .....CG-----
```

IL1 CLONE-HF674723: IGKV2-30*01(-9) REPLACED BY IGKV2-28*01 / 1N / (-9) IGKJ5*01

Alignment with FR-IMGT and CDR-IMGT delimitations

```
----- FR2-IMGT ----->_____ CDR
697      HF674723      TGGTACCTGCAGAAGCCAGGGCAGTCTCCACAGCTCCTGATCTATTTGGGT.....
X63397 HOMSAP IGKV2-28*01 F  [redacted].....
X63403 HOMSAP IGKV2-30*01 F  ---TT-A---G-----A-----AG--G--A--T---AA--T-.....
```

```
2-IMGT _____<-----
697      HF674723      .....TCTAATCGGGCCTCCGGGGTCCCT...GACAGGTTTCAGTGGCAGTGGGA
X63397 HOMSAP IGKV2-28*01 F  [redacted].....
X63403 HOMSAP IGKV2-30*01 F  .....----CC---A---T-----A...----A----C-----G
```

```
----- FR3-IMGT -----
697      HF674723      .....TCAGGCACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTTGGG
X63397 HOMSAP IGKV2-28*01 F  [redacted].....
X63403 HOMSAP IGKV2-30*01 F  .....-----T-----C-----G [redacted]
```

```
----->_____ CDR3-IMGT
697      HF674723      GTTTATTACTGCATGCAAGGTAACACAGCGGCCAAGGGACACGACTGGAGATTAAAC
X63397 HOMSAP IGKV2-28*01 F  [redacted]C-CT---AACT--TCC.....
X63403 HOMSAP IGKV2-30*01 F  [redacted]CT-----C.....
J00242 HOMSAP IGKJ5*01 F      .....-A-CAC-TT-----
```

IL1 CLONE-HF674724: IGKV3-15*01 (-2) REPLACED BY IGKV3-20*01 / 2N / (-2) IGKJ5*01

Alignment with FR-IMGT and CDR-IMGT delimitations

```
----- FR2-IMGT ----->_____
697      HF674724      TGGTACCAGCAGAAACCTGGCCAGGCTCCCAGGCTCCTCATCTATGGTGCA.....
X12686  IGKV3-20*01  [redacted].....
M23090  IGKV3-15*01(L2) [redacted].....
```

```
CDR2-IMGT _____<-----
697      HF674724      .....TCCAGCAGGGCCACTGGCATCCCA...GACAGGTTTCAGTGGCAGTGGG
X12686  IGKV3-20*01  [redacted].....
M23090  IGKV3-15*01(L2) .....-C-----T-----...-C-----
```

```
----- FR3-IMGT -----
697      HF674724      .....CCTGGGACAGACTTCACTCTCACCATCAGCAGACTGGAGCCTGAAGATTTTGCA
X12686  IGKV3-20*01  [redacted].....
M23090  IGKV3-15*01(L2) .....-G-----C---C---T-----
```

```
----->_____ CDR3-IMGT ____
697      HF674724      GTGTATTACTGTCAGCAGTAATAATAACTGGCCTGCTCACCTTCGGCCAAGGGACACGACT
X12686  IGKV3-20*01  [redacted]GG--G--CA---C-.....
M23090  IGKV3-15*01(L2) --T [redacted]C-.....
J00242  IGKJ5*01      .....-A-----
```

LPS CLONE-HF674719:

IGKV2-24*01 (-9) REPLACED BY IGKV2-30*01 / 1N / (-16) IGKJ5*01

Alignment with FR-IMGT and CDR-IMGT delimitations

```
<-FR1-IMGT ----->_____ CDR1-IMGT _____<-----
697      HF674719      ATCTCCTGCAGGTCTAGTCAAAGCCTCGTATACAGT...GATGGAAACACCTACTTGAAT
X63403   HOMSAP  IGKV2-30*01 F      -----
FM164408 HOMSAP  IGKV2-30*02 [F]     -----C-----
X12684   HOMSAP  IGKV2-24*01 F      -----C-----G-----

----- FR2-IMGT ----->_____ CDR
697      HF674719      TGGTTTCAGCAGAGGCCAGGCCAATCTCCAAGGCGCCTAATTTATAAGGTT.....
X63403   HOMSAP  IGKV2-30*01 F      -----
FM164408 HOMSAP  IGKV2-30*02 [F]     -----
X12684   HOMSAP  IGKV2-24*01 F      ---C-----GC-----A-T-----A-----

2-IMGT _____<-----
697      HF674719      .....TCTAACCGGGACTCTGGGGTCCCA...GACAGATTCAGCGGCAGTGGG
X63403   HOMSAP  IGKV2-30*01 F      .....
FM164408 HOMSAP  IGKV2-30*02 [F]     .....
X12684   HOMSAP  IGKV2-24*01 F      .....TT-----T-----

----- FR3-IMGT -----
697      HF674719      .....TCAGGCACTGATTTACACTGAAAATCAGCAGGGTGGAGCTGAGGATGTCGGG
X63403   HOMSAP  IGKV2-30*01 F      .....G-----T-----
FM164408 HOMSAP  IGKV2-30*02 [F]     .....G-----T-----
X12684   HOMSAP  IGKV2-24*01 F      .....G--G--A-----

----->___ CDR3-IMGT ___
697      HF674719      GTTTATTACTGCATGCAAGCTACACAGGGGACACGACTGGAGATTAAC
X63403   HOMSAP  IGKV2-30*01 F      -----G-----CT--C-T-C.....
FM164408 HOMSAP  IGKV2-30*02 [F]     -----G-----CT--C-T-C.....
X12684   HOMSAP  IGKV2-24*01 F      -----ATTTC-T-A.....
J00242   HOMSAP  IGKJ5*01 F      .....TCGGC--A-----
```

IL1 CLONE-HF674725: IGKV2-30*01(0) REPLACED BY INTERNAL (FR3)IGKV2-24*01 / 2P+2N / (-2) IGKJ5*01

Alignment with FR-IMGT and CDR-IMGT delimitations

```
        --- FR1-IMGT ----->_____ CDR1-IMGT _____<-----
697      HF674725      ATCTCCTGCAGGTCTAGTCAAAGCCTCGTATACAGT...GATGGAAACACCTACTTGAATT
X63403   HOMSAP IGKV2-30*01 F      [REDACTED]
FM164408 HOMSAP IGKV2-30*02 [F]    [REDACTED]
X12684   HOMSAP IGKV2-24*01 F      [REDACTED]
X63401   HOMSAP IGKV2D-24*01 ORF   [REDACTED]
```

```
        ----- FR2-IMGT ----->_____ CDR
697      HF674725      GGTTCAGCAGAGGCC.AGGCCAATCTCCAAGGCGCCTAATTTATAAGGTT.....
X63403   HOMSAP IGKV2-30*01 F      [REDACTED]
X12684   HOMSAP IGKV2-24*01 F      [REDACTED]
```

```
        2-IMGT _____<-----
697      HF674725      .....TCTAACCGGGACTCTGGGGTCCCA...GACAGATTCAGTGGCAGTGGG
X63403   HOMSAP IGKV2-30*01 F      [REDACTED]
X12684   HOMSAP IGKV2-24*01 F      [REDACTED]
```

```
        ----- FR3-IMGT -----
697      HF674725      .....GCAGGGACAGATTTACACTGAAAATCAGCAGGGTGAAGCTGAGGATGTCGGG
X63403   HOMSAP IGKV2-30*01 F      [REDACTED]
X12684   HOMSAP IGKV2-24*01 F      [REDACTED]
```

```
        ----->_____ CDR3-IMGT _____
697      HF674725      GTTTATTACTGCATGCAAGGTACACACTGGCCTCCGGCCTCACCTTCGGCCAAGGGACAC
X63403   HOMSAP IGKV2-30*01 F      [REDACTED]
X12684   HOMSAP IGKV2-24*01 F      [REDACTED]
J00242   HOMSAP IGKJ5*01 F      [REDACTED]
```