



```

      G
      G+U
      A-U
      A-U
      A-U
      G-C
      U+G
      A-U
      C
      AGAGA G
      U A
      U AUGG UCUCU U
      U ---- A G
      C GAUU A
      G U
      U-AA
      C-G
      U-A
      A-U
      G-C
      G U
      U G
      UAC
  
```

Hs Valine (V)

```

      A
      G-C
      A-U
      A-U
      A-U
      G-C
      U-A
      A-T AU
      C
      AGGC C
      U A
      U AUGG UCUCU C
      A ---- G AU
      U GAU A
      G U
      U+GA
      C-G
      U-A
      A-U
      G-C
      G U
      U G
      UAC
  
```

Hk Valine (V)

```

      A
      A-U
      G-C
      G-C
      C-G
      C-G
      A-U UU
      U CUUC A
      A A
      U UUGG GAGGG U
      G ---- A GC
      U AAC A
      A C A
      U+GU
      C-G
      A-U
      C-G
      U-A
      G A
      U A
      UCA
  
```

Hs Tryptophan (W)

```

      G
      G+U
      A-U
      G-C
      G-C
      U+G
      C-G
      A-U G
      U CUUC G
      U UUGA GAGGG U
      G ---- A C
      U AAUU A
      A G U
      U+GU
      U-A
      A-U
      C-G
      U-A
      G A
      U A
      UCA
  
```

Hk Tryptophan (W)

```

      U
      C-G
      G+U
      U-A
      G-C
      G-C
      C U
      U AUCCC G
      A C
      A UUA UUGGG U
      - - - - A A
      U AUU U
      A G A
      A-U
      A-U
      A-U
      C-G
      A-U
      C A
      U A
      GUA
  
```

Hs Tyrosine (Y1)

```

      A
      G-C
      C-G
      C-C
      A-U
      U-U
      G-C
      G-C
      U-A C
      U CUUC A
      C
      AUG G
      C AUG
      A ---
      U UUC
      A
      A-UAC
      U-A
      A-U
      A-U
      G-C
      U A
      U G
      AUA
  
```

Hs Tyrosine (Y2)

```

      U
      G-C
      G-C
      G-C
      U U
      A-U
      G-C
      G-C A
      U UCG A
      AG G
      U UCA GGC A
      --- U U
      U AGU A
      AA G U
      A-UA
      A-U
      G-C
      C-G
      A-U
      U G
      U A
      GUA
  
```

Hk Tyrosine (Y)

Continue-Additional file 5