|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Human** |  | **Chimpanzee** |  | **Gorilla** |  | **Monkey**  **Warm UP**  Compare the hemoglobin amino acid sequences for the 4 species.  1) According to your analysis, which species is the most closely related to humans? 2) Which species is the least closely related to humans? |
| 87 | Thr |  | Thr |  | Thr |  | Gln |
| 88 | Leu |  | Leu |  | Leu |  | Leu |
| 89 | Ser |  | Ser |  | Ser |  | Ser |
| 90 | Glu |  | Glu |  | Glu |  | Glu |
| 91 | Leu |  | Leu |  | Leu |  | Leu |
| 92 | His |  | His |  | His |  | His |
| 93 | Cys |  | Cys |  | Cys |  | Cys |
| 94 | Asp |  | Asp |  | Asp |  | Asp |
| 95 | Lys |  | Lys |  | Lys |  | Lys |
| 96 | Leu |  | Leu |  | Leu |  | Leu |
| 97 | His |  | His |  | His |  | His |
| 98 | Val |  | Val |  | Val |  | Val |
| 99 | Asp |  | Asp |  | Asp |  | Asp |
| 100 | Pro |  | Pro |  | Pro |  | Pro |
| 101 | Glu |  | Glu |  | Glu |  | Glu |
| 102 | Asn |  | Asn |  | Asn |  | Asn |
| 103 | Phe |  | Phe |  | Phe |  | Phe |
| 104 | Arg |  | Arg |  | Lys |  | Lys |
| 105 | Leu |  | Leu |  | Leu |  | Leu |
| 106 | Leu |  | Leu |  | Leu |  | Leu |
| 107 | Gly |  | Gly |  | Gly |  | Gly |
| 108 | Asn |  | Asn |  | Asn |  | Asn |
| 109 | Val |  | Val |  | Val |  | Val |
| 110 | Leu |  | Leu |  | Leu |  | Leu |
| 111 | Val |  | Val |  | Val |  | Val |
| 112 | Cys |  | Cys |  | Cys |  | Cys |
| 113 | Val |  | Val |  | Val |  | Val |
| 114 | Leu |  | Leu |  | Leu |  | Leu |
| 115 | Ala |  | Ala |  | Ala |  | Ala |
| 116 | His |  | His |  | His |  | His |