

AMINO ACID SEQUENCES IN CYTOCHROME-C PROTEINS FROM 20 DIFFERENT SPECIES

Amino Acid Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Human	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Rhesus monkey	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Horse	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pig, cow, sheep	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dog	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Gray whale	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Rabbit	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Kangaroo	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chicken, Turkey	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Penguin	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bekin duck	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Snapping turtle	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bullfrog	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tuna	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Screwworm fly	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Silkworm moth	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Wheat	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fungus (Neurospora)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fungus (baker's yeast)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fungus (Candida)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

[CONTINUED FROM ABOVE]

Amino Acid Number	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Human	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Rhesus monkey	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Horse	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pig, cow, sheep	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dog	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Gray whale	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Rabbit	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Kangaroo	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chicken, Turkey	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Penguin	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bekin duck	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Snapping turtle	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bullfrog	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tuna	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Screwworm fly	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Silkworm moth	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Wheat	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fungus 1 (Neurospora)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fungus 2 (baker's yeast)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fungus 3 (Candida)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Symbols in light blue or gray represent amino acids which show NO differences in any organism on the list, so you can ignore them. (adapted from Strahler, Arthur, Science & Earth History, 1987, p. 348)

AMINO ACID SYMBOLS
A = Alanine
C = Cysteine
D = Aspartic acid
E = Glutamic acid
F = Phenylalanine
G = Glycine
H = Histidine
I = Isoleucine
K = Lysine
L = Leucine
M = Methionine
N = Asparagine
P = Proline
Q = Glutamine
R = Arginine
S = Serine
T = Threonine
V = Valine
W = Tryptophan
Y = Tyrosine