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Supplementary Materials

Isolation and Characterization of Major and Minor Collagens from Hyaline Cartilage of Hoki (*Macruronus Novaezelandiae*)

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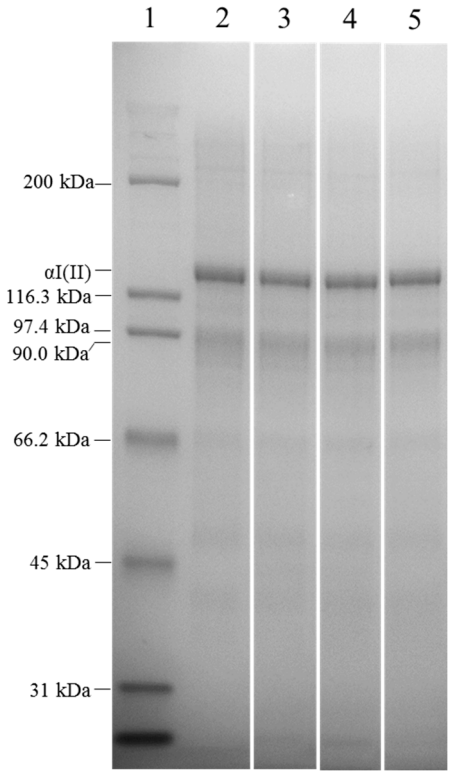

Figure S1. SDS-PAGE analysis of type II hoki collagen treated with 0.5% pepsin for various times. Lane 1, Broad range marker; Lane 2, 0 h; Lane 3, 3 h, Lane 4, 6 h; Lane 5, 24 h.

Table S1. Amino acid composition (number of residues/1000 residues) of type II collagen isolated from hoki nasal cartilage and previous studies of type II from other species and tissue.

	Hoki Pepsin-Soluble Type II	Hoki Alkaline-Soluble Type II	Lamprey Notochord	Skate Fin	Sturgeon Cartilage	Bovine Cartilage	Chicken Sternum
Asp	50.5	51.22	47.0	41.0	43.9	48.0	46.0
Glu	89.3	91.68	99.0	90.0	88.5	92.0	85.0
Hyp	105.3	96.83	74.0	75.0	104.5	97.0	117.0
Ser	46.4	45.45	38.0	30.0	37.3	28.0	22.0
Gly	277.1	288.4	330.0	352.0	322.9	330.0	310.0
His	4.2	5.11	4.0	2.0	8.1	2.0	4.0
Arg	51.8	50.6	51.0	51.0	53.0	51.0	52.0
Thr	26.6	25.82	27.0	39.0	21.9	23.0	26.0
Ala	89.5	86.12	104.0	95.0	89.0	98.0	104.0
Pro	123.6	119.67	115.0	113.0	121.6	115.0	115.0
Tyr	1.6	1.98	2.0	2.0	2.6	1.0	5.0
Val	18.5	20.74	12.0	19.0	15.5	18.0	19.0
Met	16.5	11.77	0.0	10.0	3.9	9.0	10.0
Ile	12.4	13.68	11.0	8.0	11.5	10.0	11.0
Leu	41.9	41.15	29.0	27.0	27.7	26.0	27.0
Hyl	15.3	17.71	22.0	18.0	18.7	20.0	-
Phe	14.4	14.36	12.0	12.0	14.6	14.0	15.0
Lys	15.3	17.46	16.0	12.0	15.3	18.0	14.0
Cys	-	-	-	-	-	-	-
Citation			[22]	[31]	[43]	[30]	[28]

Table S2. Amino acid composition (number of residues/1000 residues) of type IX collagen isolated from hoki nasal cartilage and the previous study of type IX from chicken sternum.

	Hoki Pepsin-Soluble Type IX	Hoki Alkaline-Soluble Type IX	Chicken Sternum
Asp	52.6	55.2	53
Glu	86.5	106.1	97
Hyp	85.9	89.4	95
Ser	46.6	35.0	38
Gly	299.3	278.2	323
His	7.9	10.2	8
Arg	50.2	43.6	46
Thr	26.4	30.2	16
Ala	74.1	57.7	57
Pro	124.6	93.8	90
Tyr	1.5	3.2	5
Val	24.8	35.8	23
Met	13.7	16.2	9
Ile	16.0	25.5	27
Leu	40.4	54.5	48
Hyl	19.5	28.7	34
Phe	11.0	12.0	8
Lys	17.9	21.9	21
Cys	1.1 [1]	2.8 [1]	2
Citation			[20]

[1] Measured value for cysteine is inaccurate, as it is theoretically destroyed during sample preparation.

Table S3. Amino acid composition (number of residues/1000 residues) of type XI collagen isolated from hoki nasal cartilage and previous studies of type XI from other species and tissue.

	Hoki Alkaline-Soluble Type XI	Lamprey Notochord α1(XI)	Lamprey Notochord α2(XI)	Human Cartilage α1(XI)	Human Cartilage α2(XI)
Asp	47.3	58.0	52.0	46.0	50.0
Glu	98.1	105.0	100.0	107.0	98.0
Hyp	105.3	61.0	56.0	98.0	93.0
Ser	36.5	42.0	43.0	25.0	28.0
Gly	297.0	332.0	360.0	334.0	327.0
His	6.4	8.0	8.0	6.0	11.0
Arg	47.2	42.0	43.0	45.0	48.0
Thr	24.6	24.0	28.0	17.0	25.0
Ala	65.9	69.0	65.0	54.0	49.0
Pro	117.9	106.0	96.0	109.0	119.0
Tyr	1.5	2.0	< 2.0	< 2.0	3.0
Val	22.5	30.0	25.0	28.0	18.0
Met	12.1	-	-	10.0	9.0
Ile	14.1	19.0	16.0	15.0	16.0
Leu	46.6	46.0	44.0	35.0	39.0
Hyl	26.3	31.0	37.0	38.0	40.0
Phe	13.8	8.0	9.0	11.0	11.0
Lys	17.0	21.0	17.0	19.0	15.0
Cys	-	-	-	-	-
Citation		[22]	[22]	[33]	[33]