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Figure legends

Figure 1

Resolution of monkey retina proteins on 2D gels stained with SYPRO Ruby (pH3-10)

Peripheral retina and macula extracted proteins (300 μ g each) were isoelectric focused on pH3-10 IPG strip and then separated on 12% SDS-page gels. Spots identified by LC-MS/MS are marked by spot numbers.

Figure 2

Resolution of monkey retina proteins on 2D gels stained with SYPRO Ruby (pH 4-7).

Peripheral retina and macula extract proteins (300 μ g each) were isoelectric focused on pH4-7 IPG strip. Spots identified by LC-MS/MS are marked by the spot number.

Figure 3

Resolution of monkey retina proteins on 2D gels stained with SYPRO Ruby (pH5-8).

Peripheral retina and macula extract proteins (300 μ g each) were isoelectric focused on pH5-8 IPG strip. Spots identified by LC-MS/MS are marked by the spot number.

Figure 4

Resolution of monkey retina proteins on 2D gels stained with SYPRO Ruby (pH7-10).

Peripheral retina and macula extract proteins (300 μ g each) were isoelectric focused on pH 7-10. Spots identified by LC-MS/MS are marked by the spot number.

Figure 5

Western blot of 8 proteins.

Five micrograms of each sample from the peripheral retina and macula were loaded onto SDS-page gel (for γ -synuclein 15 μ g loading). After transferring to PVDF membrane, the

proteins were detected with antibodies specific to Arrestin-C (1), Mn-SOD (2), γ -synuclein (3), E-FABP (4), Tropomyosin1a Br-1, Br-3 (5), Tropomyosin1a TM311 (6), hnRNPs A2/B1 (7), and hnRNPs C1/C2 (8). Lane P; peripheral retina, Lane M; macula.

Figure 6

2D western blotting of Mn-SOD.

Thirty microgram of each sample from the peripheral retina and macula were separated by 2D gel electrophoresis. After transferring to PVDF membrane, the proteins were detected with antibodies specific to Mn-SOD.

Figure 7

Tissue localization of macula enriched proteins.

Four micrometer paraffin section of monkey eye was stained with hematoxylin and eosin (A), other sections were labeled with antibodies specific to Arrestin-C (B), Mn-SOD (C), γ -synuclein (D), E-FABP (E), Tropomyosin Br-1, Br-3 (F), TM311 to Tropomyosin (G), hnRNPs A2/B1 (H), and hnRNPs C1/C2 (I). GCL, ganglion cell layer; INL, inner nuclear layer; OPL, outer plexiform layer; ONL, outer nuclear layer; PIS, photoreceptor inner segment; POS, photoreceptor outer segment; RPE, retinal pigment epithelial; Ch,

choroid. (Bar; 50 μ)

Figure 1

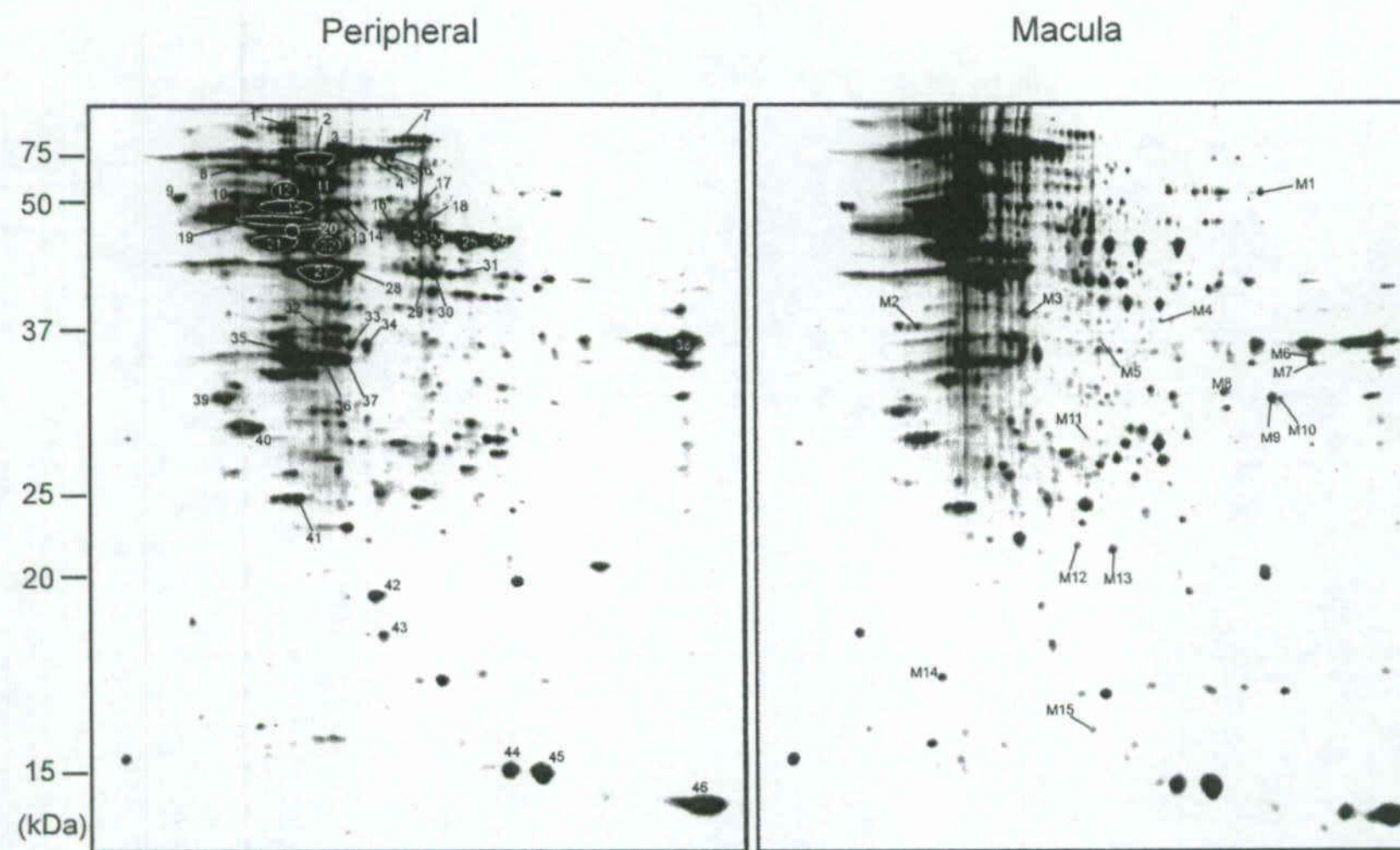


Figure 2

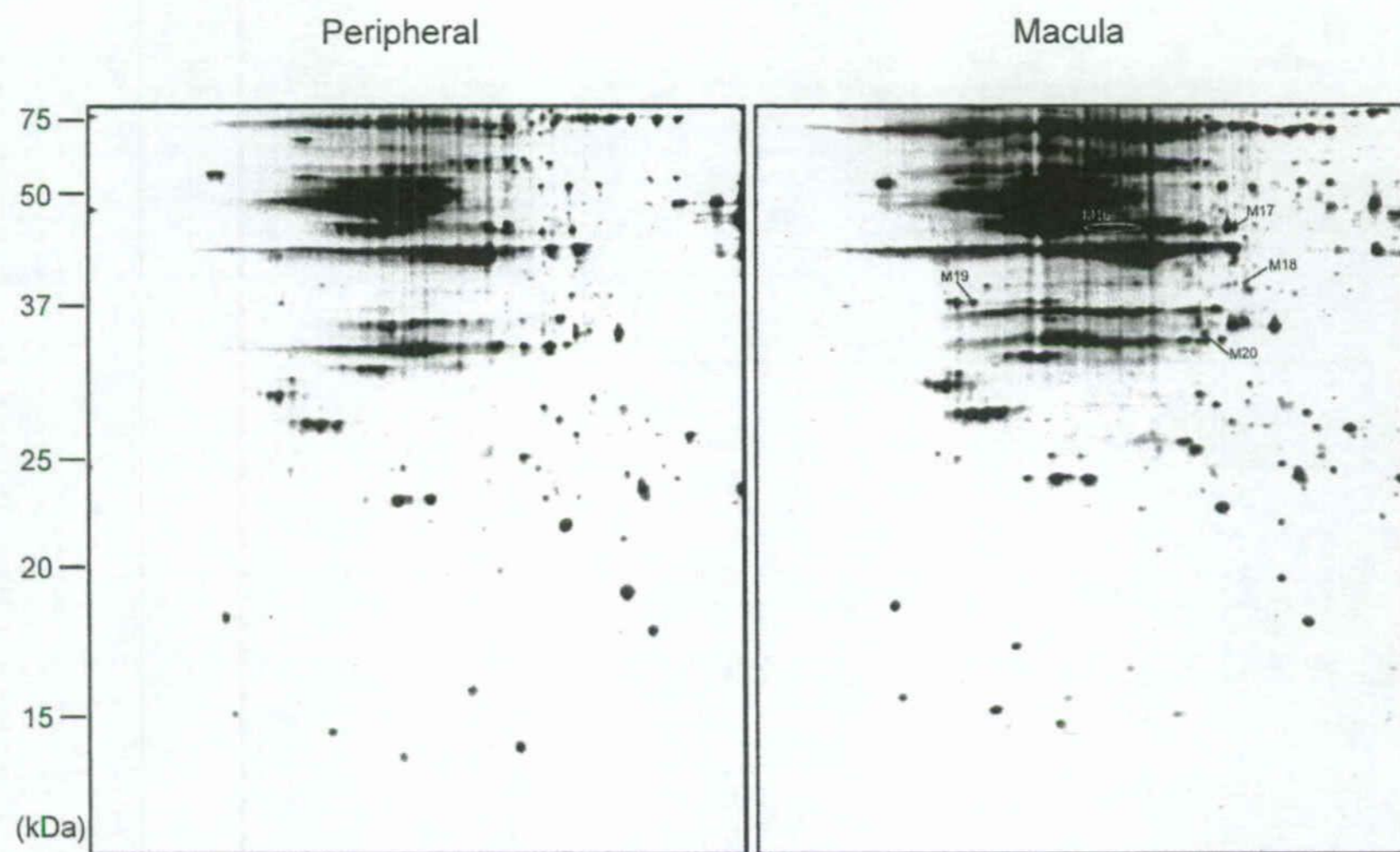


Figure 3

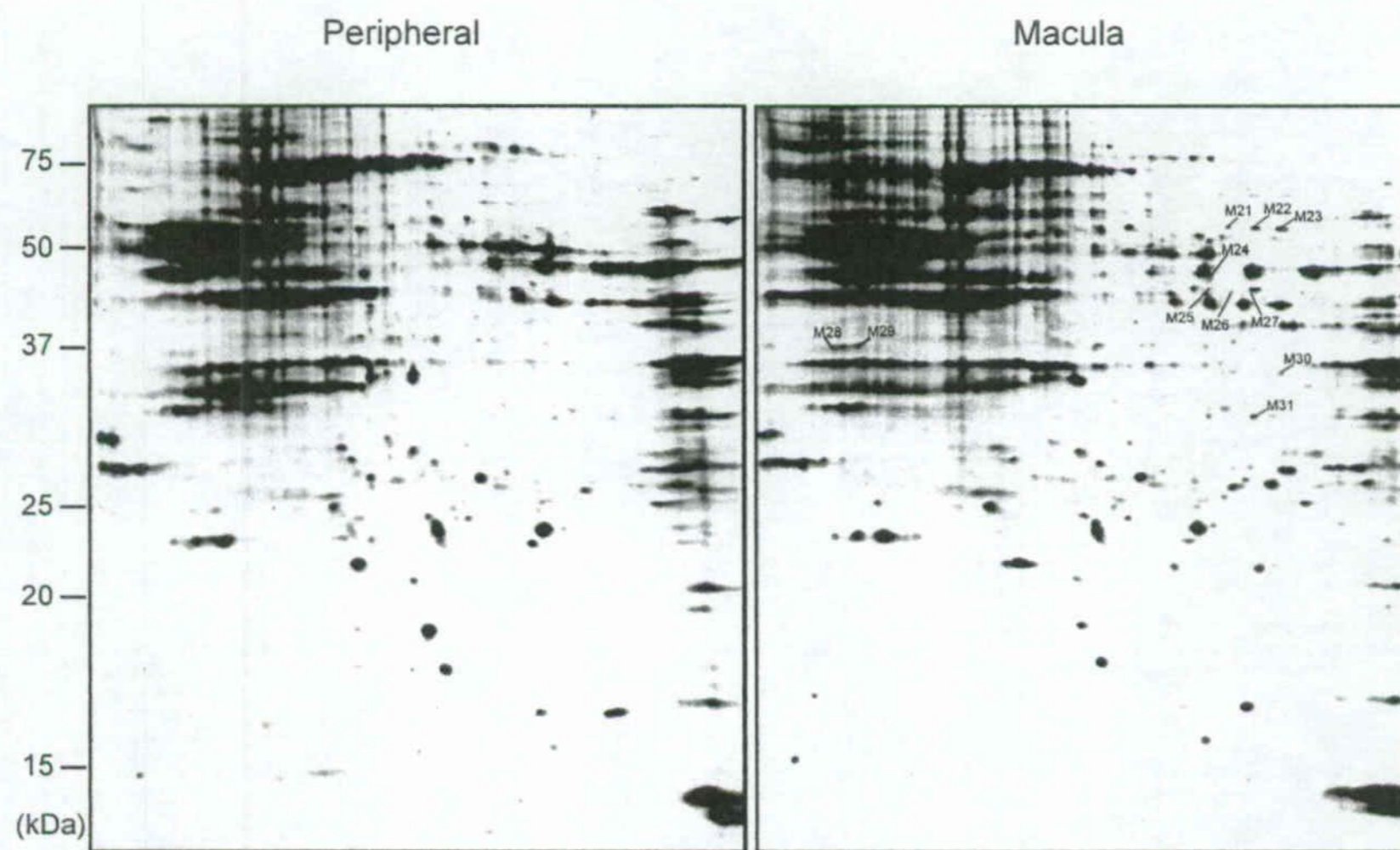


Figure 4

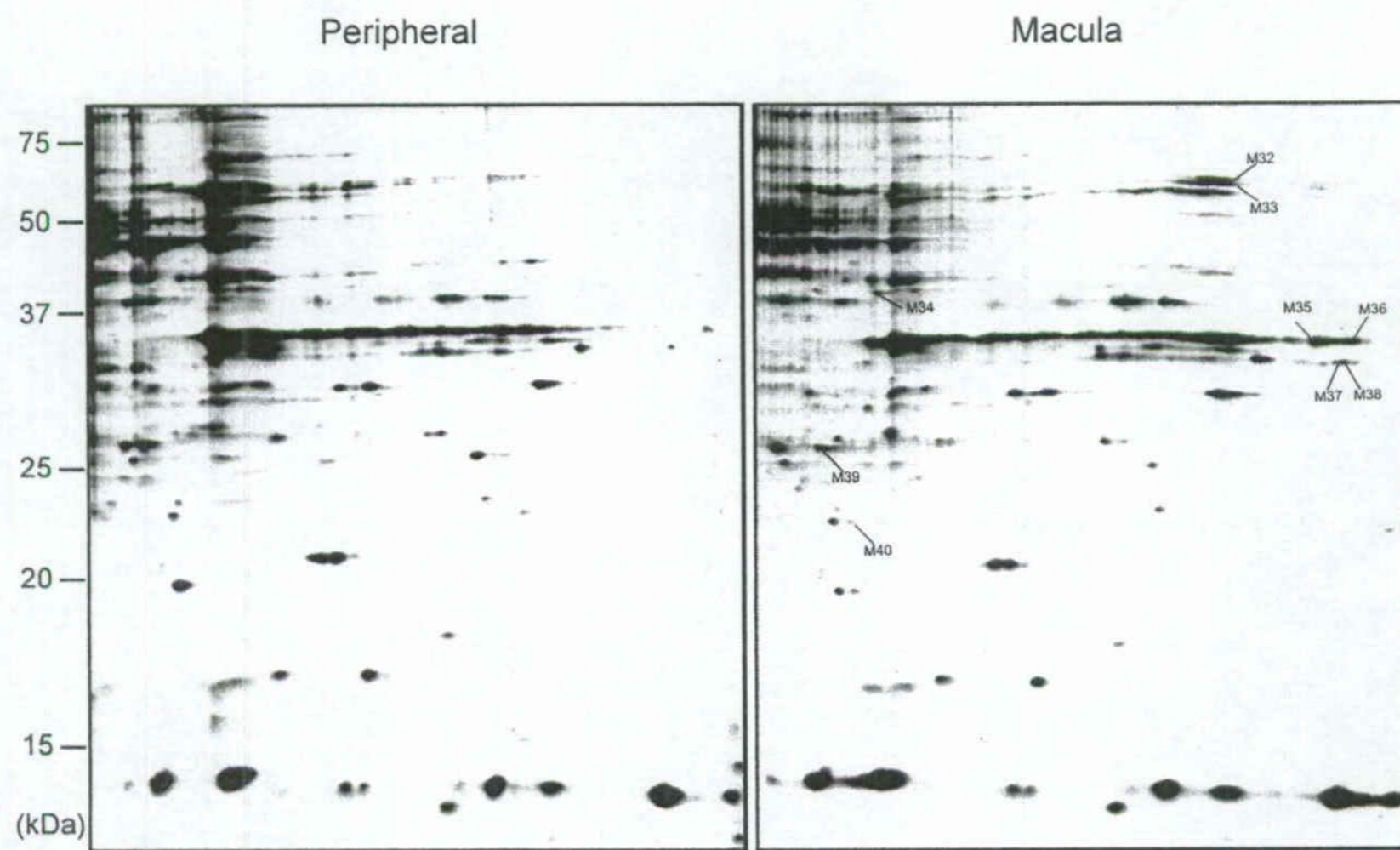


Figure 5

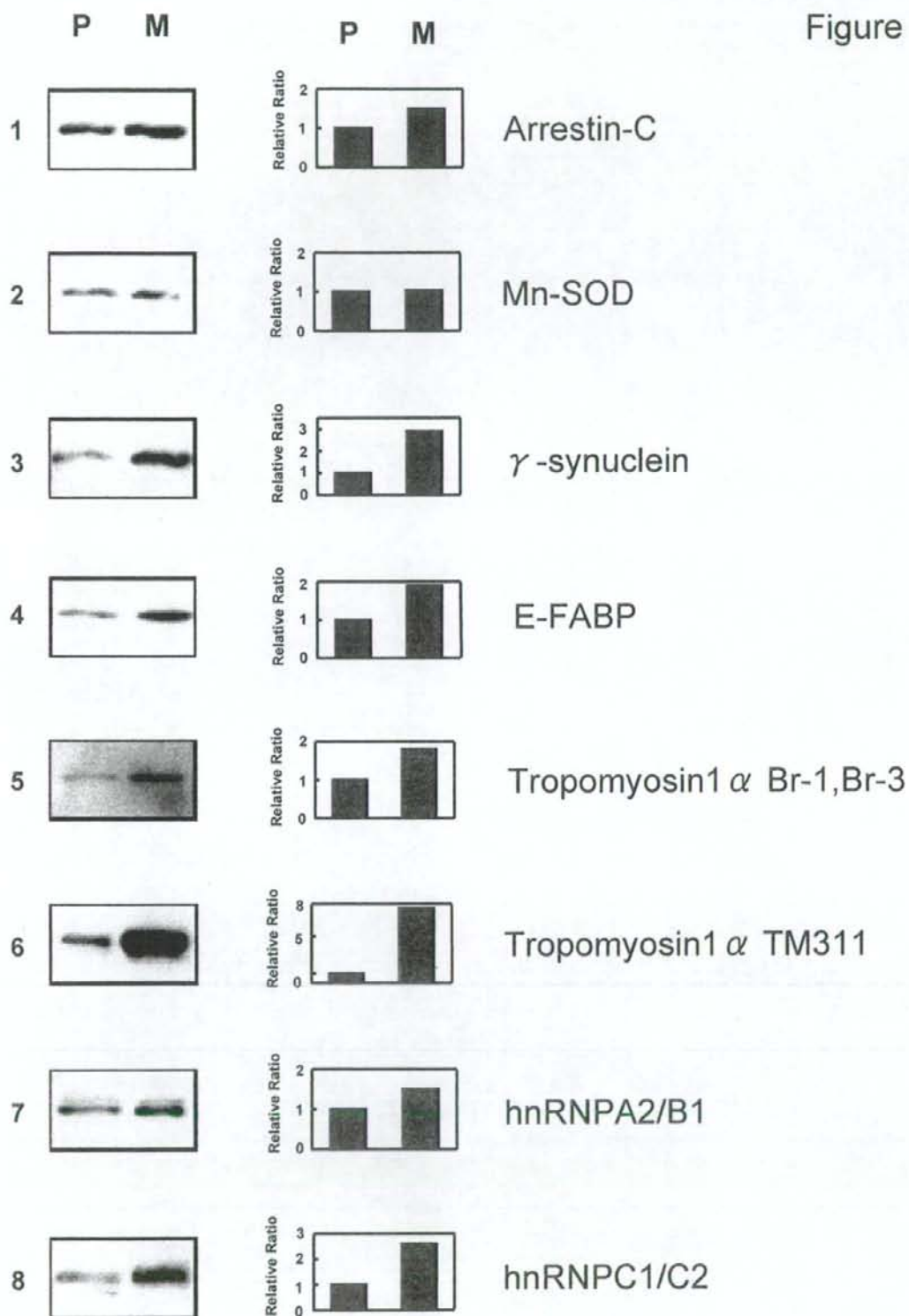


Figure 6

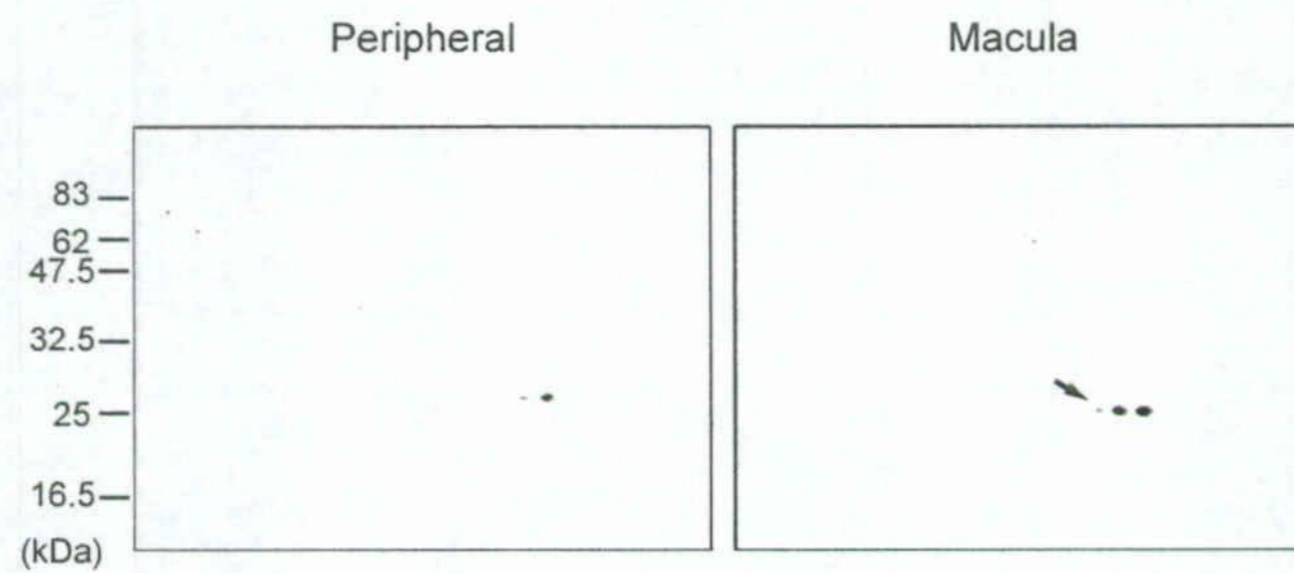
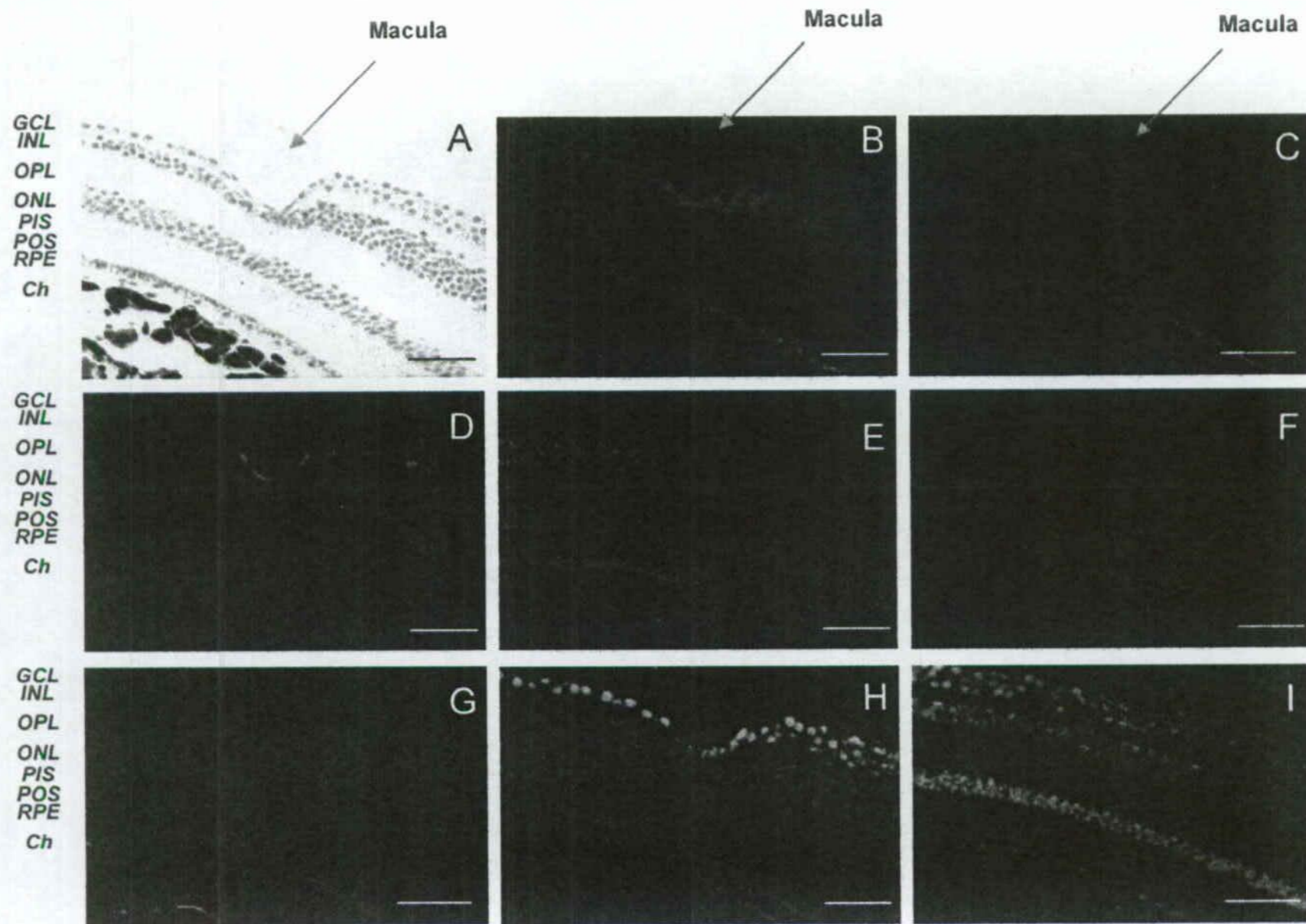


Figure 7



Tables

Table 1

Proteins identified macular and peripheral retina.

Abundant proteins in macular and peripheral retina are identified by LC-MS/MS and listed.

^(a)Spot numbers correspond to the numbers on gel images in figure 1.

^(b)Accession no. corresponds to UniProtKB/Swiss-Prot database (Release 48.8).

^(c)MW and pI is theoretical score by Bioworks ver.3.1.

*Oxidation of methionine.

Spot no. ^(a)	Protein name	Database Accession no. ^(b)	MW (kDa) ^(c)	pI ^(c)	Sequence coverage (%)	Precursor ion MH+	Charge	XC	Residue	Sequence
1	Heat shock protein HSP 90-alpha	P07900	84.5	4.94	10.53	1243.44	2	3.66	100-111	ADLINNLGTIAK
						1152.24	2	3.03	283-291	YIDQEELNK
						1834.87	2	4.55	299-313	NPDDITNEEYGEFYK
						1265.40	2	3.09	345-354	RAPFDLFENR
						1169.23	2	2.23	446-455	LGIHEDSQNR
						1225.38	2	2.85	489-498	HIYYITGETK
						1236.32	2	3.23	499-509	DQVANSFAFVER
1	Heat shock protein HSP 90-beta	P08238	83.1	4.97	6.09	1545.72	2	2.34	41-54	ELISNASDALDKIR
						1040.11	2	2.43	55-63	YESLTDPSK
						1243.44	2	3.66	95-106	ADLINNLGTIAK
						1152.24	2	3.03	275-283	YIDQEELNK
2	Heat shock cognate 71 kDa protein	P11142	70.9	5.37	29.41	1488.58	2	2.96	37-49	TTPSYVAFTDTER
						1666.84	2	4.15	57-71	NQVAM*NPTNTVFDAK
						1271.38	2	2.13	78-88	FDDAVVQSDM*K
						1181.32	2	3.19	103-112	VQVEYKGETK
						1633.85	2	3.48	113-126	SFYPEEVSSM*VLTK
						1269.49	2	3.69	127-137	M*KEIAEAYLGK
						1200.37	2	3.82	160-171	DAGTIAGLNVLK
						1789.07	2	4.31	172-188	IINEPTAAAIAYGLDKK
						1252.47	2	3.36	237-246	M*VNHFAIEFK
						1254.37	2	2.60	302-311	FEELNADLFR
						1482.67	2	3.92	329-342	SQIHDIIVLVGGSTR
						1082.23	2	2.37	349-357	LLQDFFNK
						773.86	1	1.80	452-458	DNNLLGK
						1018.15	2	2.43	501-509	ITITNDKGR
						990.09	2	2.54	510-517	LSKEDIK
1142.31	2	2.30	518-526	M*VQEAKEYK						
1320.45	2	3.71	540-550	NSLESYAFNM*K						