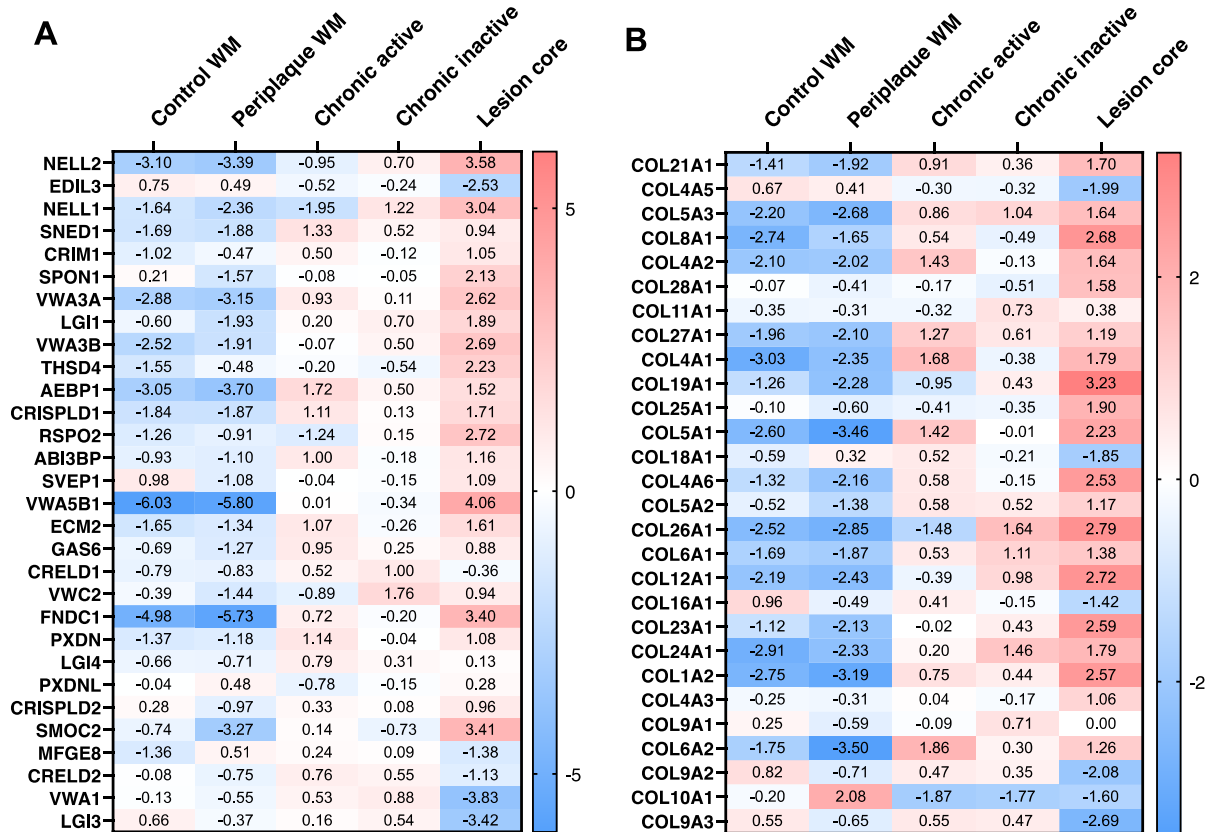


Supplemental/Extra Figures



Suppl Figure S1. Greatest differentially expressed proposed glycoproteins and collagens. **(A)** Greatest differentially expressed list of minor glycoproteins. **(B)**, Full list of greatest differentially expressed collagen genes. Listed genes are in descending order of greatest median expression in lesion core (top=greatest), have adjusted p -value < 0.05 log2 fold change, and median-normalized expression > 0.05 in at least one condition.

Supplementary Tables

Supplementary Table S1. Major glycoproteins

Gene names	Protein names and synonyms	CNS-enriched glycoproteins	
Major known glycoproteins		Agrn Coch Ntn1-4 Ntn1 Reln Slit1-3 Sspo Tecta,b	
Efemp1,2	Fibulins 3,4/Epidermal growth factor-containing fibulin-like extracellular matrix protein 1,2	Agrin Cochlin Netrins Netrins G1, G2 Reelin Slit homologs 1-3 SCO-spondin Tectorins alpha and beta	
Eln	Elastin	Vascular ECM proteins	
Emid1,2	EMI domain containing 1,2	Fga, b, g	Fibrinogen alpha, beta, gamma chains
Emilin1-3	Elastin microfibril interfacer 1-3	Vtn	Vitronectin
Fbn1,2	Fibrillin	Vwf	von Willebrand factor
Fbln1,2,5,7	Fibulin 1,2,5,7	CCN family proteins	
Fn1	Fibronectin 1	CCN1/Cyr 61	Cysteine rich protein 61, CCN1
Fras1	Fraser extracellular matrix complex subunit/Fraser syndrome homolog 1	CCN2/Ctgf	Connective tissue growth factor
Gldn	Gliomedin	CCN3/Nov	Nephroblastoma overexpressed gene
Hmcn1,2	Hemicentin 1,2	CCN4-6/Wisp1-3	WNT1 inducible signaling pathway proteins
Ibsp	Integrin binding sialoprotein, BSP	Growth-factor binding proteins	
Matn1-4	Matrilin 1-4	Bmper	BMP-binding endothelial regulator
Mfap1a,1b, 2-5	Microfibrillar-associated proteins 1A,1B, 2-5	Igfals	Insulin-like growth factor-binding protein, acid labile subunit
Mmrn1,2	Multimerin 1,2	Igfbp1-7	Insulin-like growth factor-binding proteins 1-7
Npnt	Nephronectin	Igfbp1	Insulin-like growth factor-binding protein-like 1
Papln	Papilin, proteoglycan-like sulfated glycoprotein	Kcp	Kielin/chordin-like protein
Postn	Periostin, osteoblast specific factor	Ltp1-4	Latent transforming growth factor beta-binding protein
Sparc	Secreted acidic cysteine rich glycoprotein	ECM of bones, cartilage, and teeth	
Sparcl1	Secreted acidic cysteine rich glycoprotein-like 1, hevin	Ambn	Ameloblastin
Spp1	Secreted phosphoprotein 1, osteopontin	Amelx	Amelogenin X chromosome
Srpx	Sushi-repeat-containing protein	Bglap2	Bone gamma-carboxyglutamate protein 2
Tnc, n, r, xa, xb	Tenascins c, n, r, xa, xb		
Thbs1-4	Thrombospondins 1-4		
TSP5/Comp	Thrombospondin 5/Cartilage oligomeric matrix protein		
Basement membrane components			
Colq	Collagen-like tail subunit of asymmetric acetylcholinesterase		
Lama1-5	Laminin alpha subunits		
Lamb1-4	Laminin beta subunits		
Lamc1-3	Laminin gamma subunits		
Nid1,2	Nidogens 1,2		

Bglap-rs1	Bone gamma-carboxyglutamate protein-related sequence 1
Cilp	Cartilage intermediate-layer protein, nucleotide pyrophosphohydrolase

Cilp2	Cartilage intermediate layer protein 2
Dmp1	Dentin matrix protein 1
Dpt	Dermatopontin
Dspp	Dentin sialophosphoprotein
Mgp	Matrix Gla protein

Supplementary Table S2. Other glycoproteins

Abi3bp	ABI gene family, member 3 (NESH)-binding protein	Nell1/2	NEL-like 1 and 2
Adipoq	Adiponectin, C1Q, and collagen domain-containing protein	Oit3	Oncoprotein-induced transcript 3
Aebp1	AE-binding protein 1	Otog	Otogelin
Bsph1	Binder of sperm protein homolog 1	Pcolce/Pcolce2	2 Procollagen C-endopeptidase enhancer proteins
Cdcp2	CUB domain-containing protein 2	Pxdn	Peroxidasin homolog
Creld1/2	Cysteine-rich with EGF-like domains 1 and 2	Rspo1-4	4 R-spondin homologs
Crim1	Cysteine-rich transmembrane BMP regulator 1 (chordin like)	Slamf6	SLAM family member 6
Crispld1/2	Cysteine-rich secretory protein LCCL domain-containing 1 and 2	Smoc1,2	SPARC-related modular calcium-binding proteins 1 and 2
Cthrc1	Collagen triple helix repeat containing 1	Sned1	Sushi, nidogen, and EGF-like domains 1
Ddx26b	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 26B	Spon1,2	Spondin 1, (f-spondin) extracellular matrix protein, 2/extracellular matrix protein
Dmbt1	Deleted in malignant brain tumors 1	SrpX2	Sushi-repeat-containing protein, X-linked 2
Ecm1,2	Extracellular matrix protein 1, 2/female organ, and adipocyte specific	Svep1	Sushi, von Willebrand factor type A, EGF, and pentraxin domain-containing 1
Edil3	EGF-like repeats and discoidin I-like domains 3	Tgfbi	Transforming growth factor β -induced
Egflam	EGF-like, fibronectin type III, and laminin G domains	Thsd4	Thrombospondin type I domain-containing 4
Fgl1/2	Fibrinogen-like proteins 1 and 2	Tinag/Tinagl1	Tubulointerstitial nephritis antigen/tubulointerstitial nephritis antigen-like 1
Fndc1/7/8	3 Fibronectin type III domain-containing proteins	Tnfaip6	Tumor necrosis factor α -induced protein 6
Gas6	Growth arrest specific 6	Tsku	Tsukushin
Igsf10	Immunoglobulin superfamily, member 10	Vit	Vitrin
Lgi1-4	4 Leucine-rich repeat LGI family proteins	Vwa1-5	5 von Willebrand factor A domain-containing proteins
Lrg1	Leucine-rich α -2-glycoprotein 1	Vwc2/2l/e	3 von Willebrand factor C domain-containing proteins
Mepe	Matrix extracellular phosphoglycoprotein with ASARM motif	VwD/E	2 von Willebrand factor D and EGF domain proteins
Mfge8	Milk fat globule-EGF factor 8 protein	Zp1-4	4 Zona pellucida glycoproteins
		Zp3r	Zona pellucida 3 receptor
		Zpld1	Zona pellucida-like domain-containing 1

Supplementary Table S3. Proteoglycans

Gene names	Protein names and synonyms
INTRACELLULAR	
Srgn	Serglycin
CELL SURFACE	
Transmembrane	
Sdc1-4 Cspg4 Tgfbr3 Ptrz1	Syndecan, 1-4 NG2 Betaglycan/transforming growth factor, beta receptor III/ Phosphacan/protein tyrosine phosphatase, receptor type Z, polypeptide 1
GPI-Anchored	
Gpc1-6	Glypican, 1-6
PERICELLULAR	
Basement membrane	
Hspg2 Agrn Col18a1 Col15a1	Heparan sulfate proteoglycan 2/perlecan Agrin Collagen XVIII Collagen XV
EXTRACELLULAR	
Hyalectins/Lectins	
Acan Bcan Vcan Ncan	Aggrecan Brevican Versican Neurocan

Small leucine-rich proteoglycans (SLRPs)	
SLRPs - Canonical, Class 1	
Bgn	Biglycan
Dcn	Decorin
Aspn	Asporin
Ecm2	Extracellular matrix protein 2, female organ and adipocyte specific
Ecmx	ECMX
SLRPs - Canonical, Class 2	
Fmod	Fibromodulin
Lum	Lumican
Kera	Keratocan
Omd	Osteomodulin/osteoaderhin
Prelp	Proline arginine-rich end leucine-rich repeat/PREL P
SLRPs - Canonical, Class 3	
Epyc	Epiphycan
Ogn	Osteoglycin/mimecan
Optc	Opticin
SLRPs – Non-canonical, Class 4	
Chad	Chondroadherin
Chadl	Chondroadherin-like
Nyx	Nyctalopin
Tsku	Tsukushi
SLRPs – Non-canonical, Class 5	
Podn	Podocan
Podnl1	Podocan-like 1
SPOCK	
Spock1-3	Sparc/osteonectin, cwcv and kazal-like domains proteoglycan/testican 1-3
Unclassified	
Prg2-4 Impg1,2	Proteoglycan, bone marrow 2-4 Interphotoreceptor matrix proteoglycan 1,2
Esm1	Endocan/endothelial cell-specific molecule 1

Supplementary Table S4. Collagens

Fibrillar (Type I, II, III, V, XI, XXIV, XXVIII)

Col1a1,2	Collagen type I alpha 1, 2 chain
Col2a1	Collagen type II alpha 1 chain
Col3a1	Collagen type III alpha 1 chain
Col5a1-3	Collagen type V alpha 1-3 chain
Col11a1,2	Collagen type XI alpha 1,2 chain
Col24a1	Collagen type XXIV alpha 1 chain
Col27a1	Collagen type XXVII alpha 1 chain
Col28a1	Collagen type XXVIII alpha 1 chain

Network-forming (Type IV, VIII, X)

Col4a1-6	Collagen type IV alpha 1-6 chain
Col8a1	Collagen type VIII alpha 1 chain
Col10a1	Collagen type X alpha 1 chain

Microfibril forming (Type VI)

Col6a1-6	Collagen type VI alpha 1-6 chain
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Anchoring fibrils (Type VII)

Col7a1	Collagen type VII alpha 1 chain
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FACIT (Fibril Associated Collagens with Interrupted Triple Helices (IX, XII, XIV, XVI, XIX, XX, XXI, XXII)

Col9a1,2,3	Collagen type IX alpha 1-3 chain
Col12a1	Collagen type XII alpha 1 chain
Col14a1	Collagen type XIV alpha 1 chain
Col15	Collagen type XV alpha 1 chain
Col16a1	Collagen type XVI alpha 1 chain
Col19a1	Collagen type XIX alpha 1 chain
Col20a1	Collagen type XX alpha 1 chain
Col21a1	Collagen type XXI alpha 1 chain
Col22a1	Collagen type XXII alpha 1 chain

Short chain (Type VIII, X)

Col8a1,2	Collagen type VIII alpha 1,2 chain
Col10a1	Collagen type X alpha 1 chain

Multiplexin (Multiple Triple Helix domains with Interruptions (Type XV, XVIII)

Col15a1	Collagen type XV alpha 1 chain
Col18a1	Collagen type XVIII alpha 1 chain

MACIT (Membrane Associated Collagens with Interrupted Triple Helices) (Type XIII, XVII)

Col13a1	Collagen type XIII alpha 1 chain
Col17a1	Collagen type XVII alpha 1 chain
Col23a1	Collagen type XXIII alpha 1 chain
Col25a1	Collagen type XXV alpha 1 chain