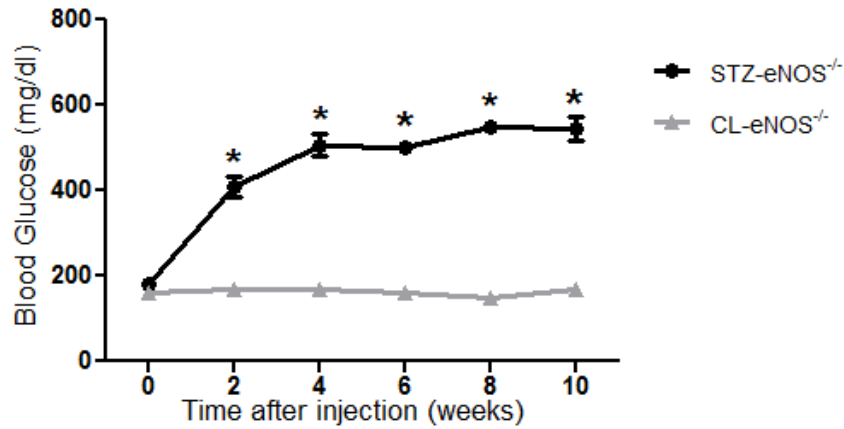
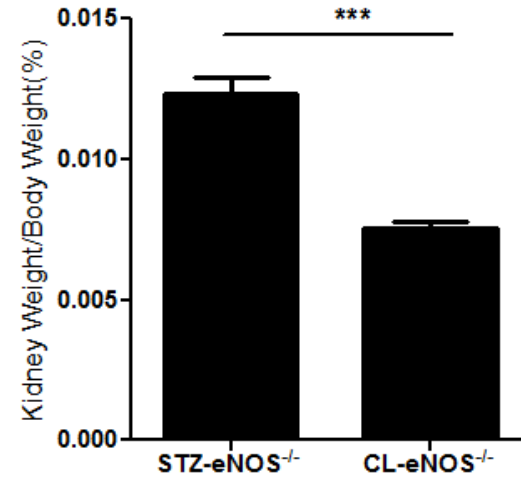


# Supplementary figure 1 (Figure S1): Body weight, hyperglycemia, and albuminuria in diabetic and control mice

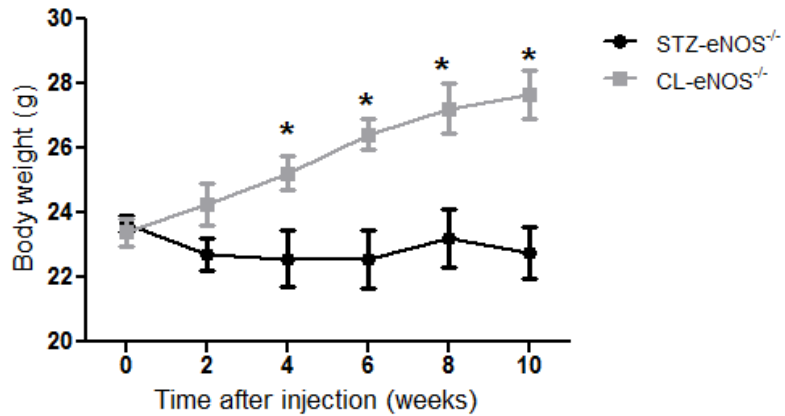
A.



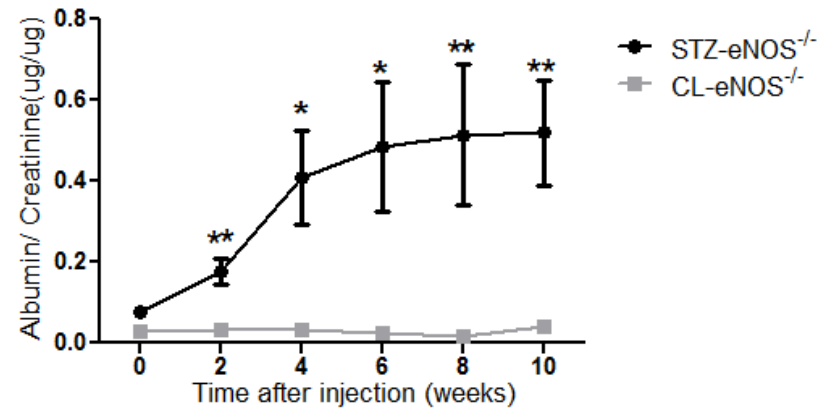
C.



B.

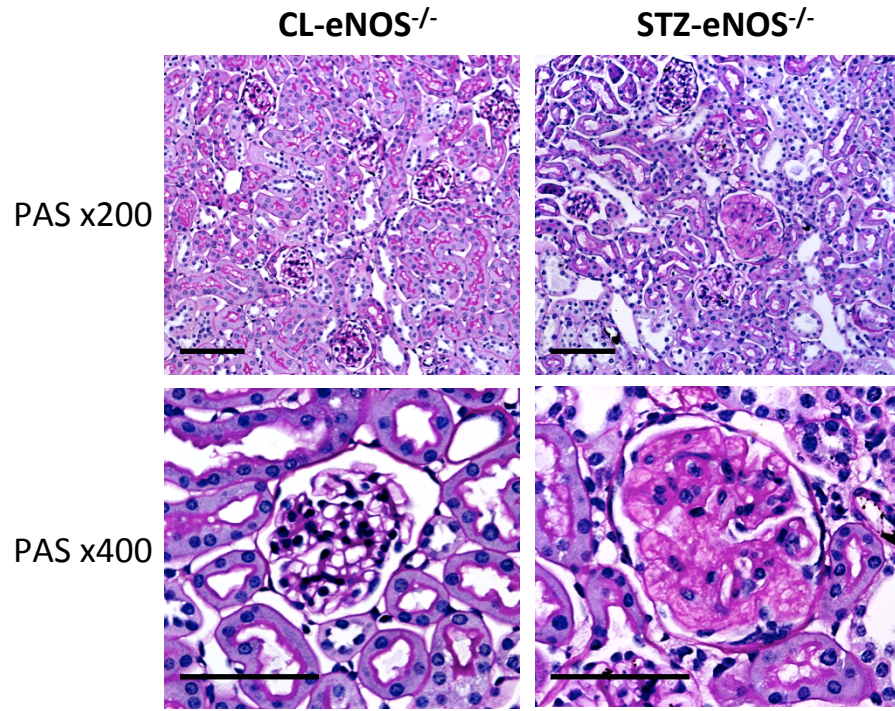


D.

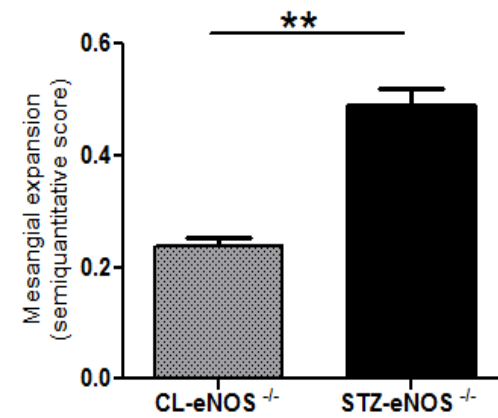


# Supplementary figure 2 (Figure S2): Histology and morphometric analysis

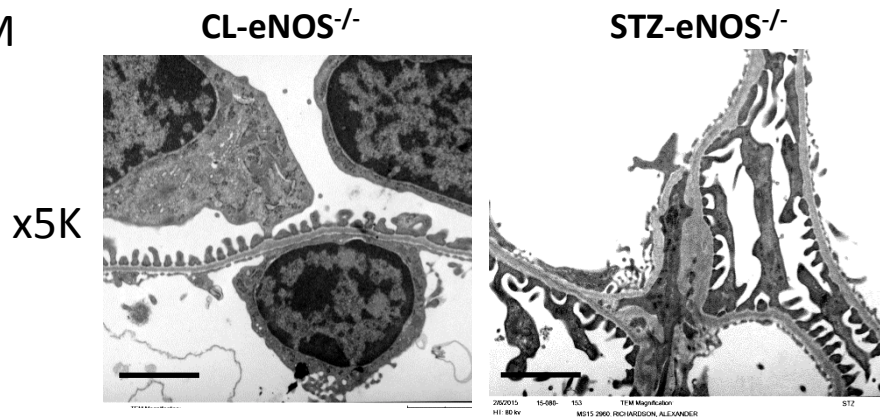
## A. Light microscopy



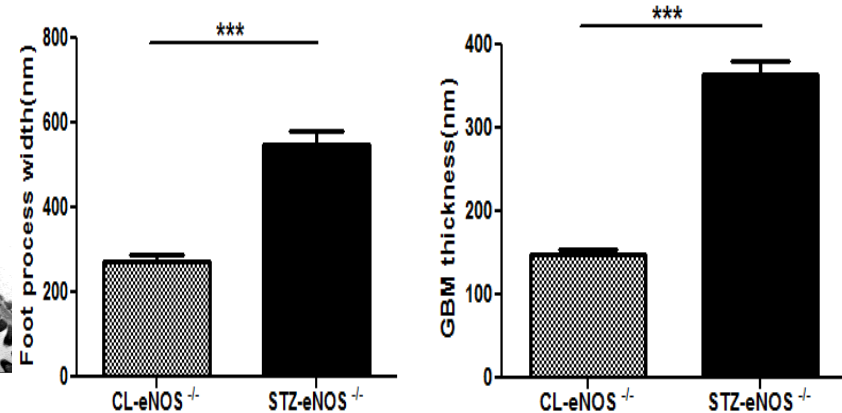
### Quantification of glomerular mesangial area



## B. EM

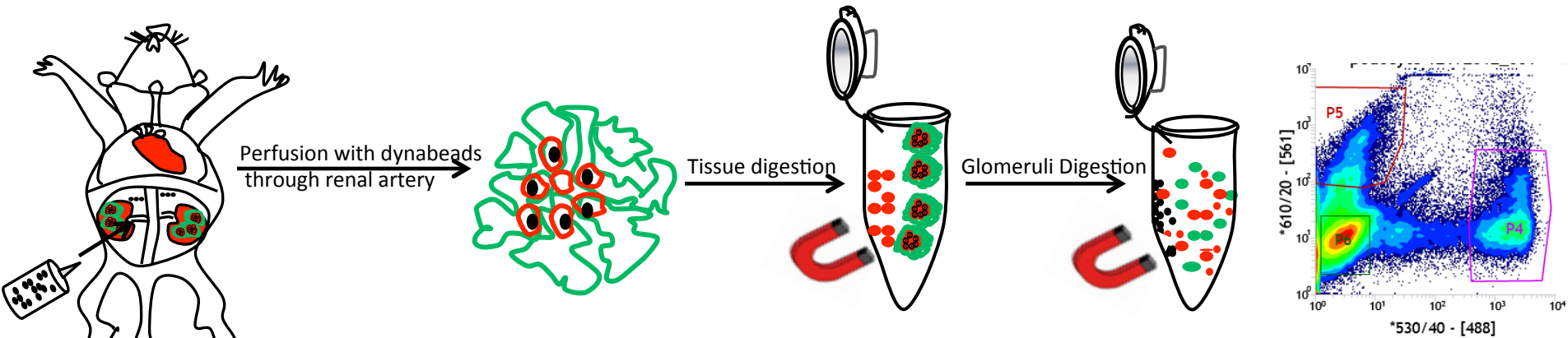


### Quantification of foot process width and GBM thickness

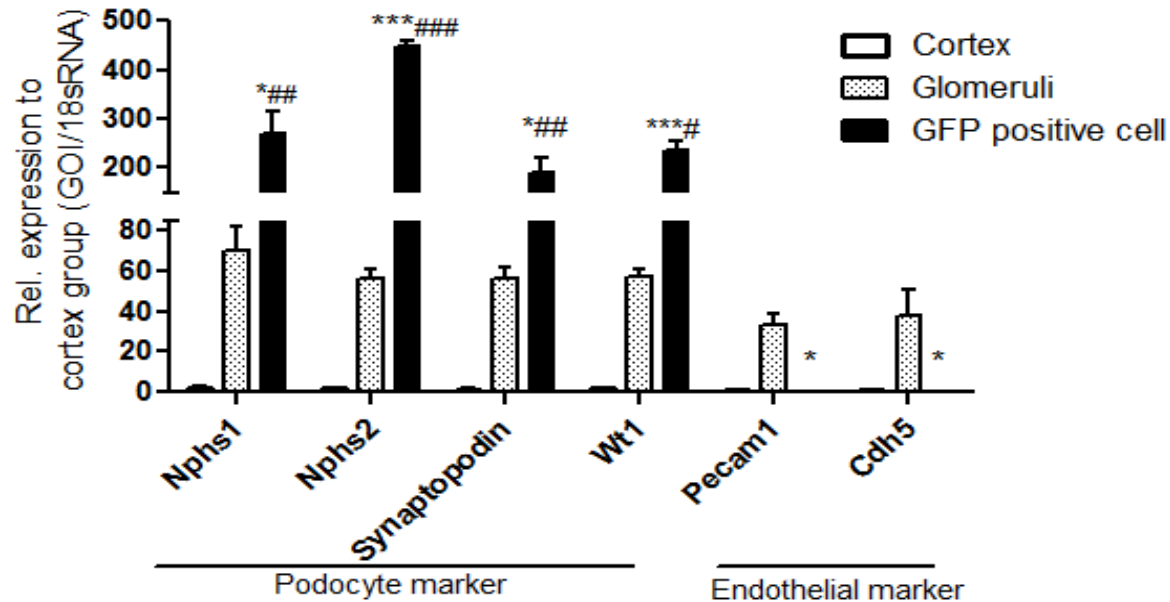


# Supplementary figure 3 (Figure S3): Podocyte sorting process and qPCR validation of markers in sorted podocytes

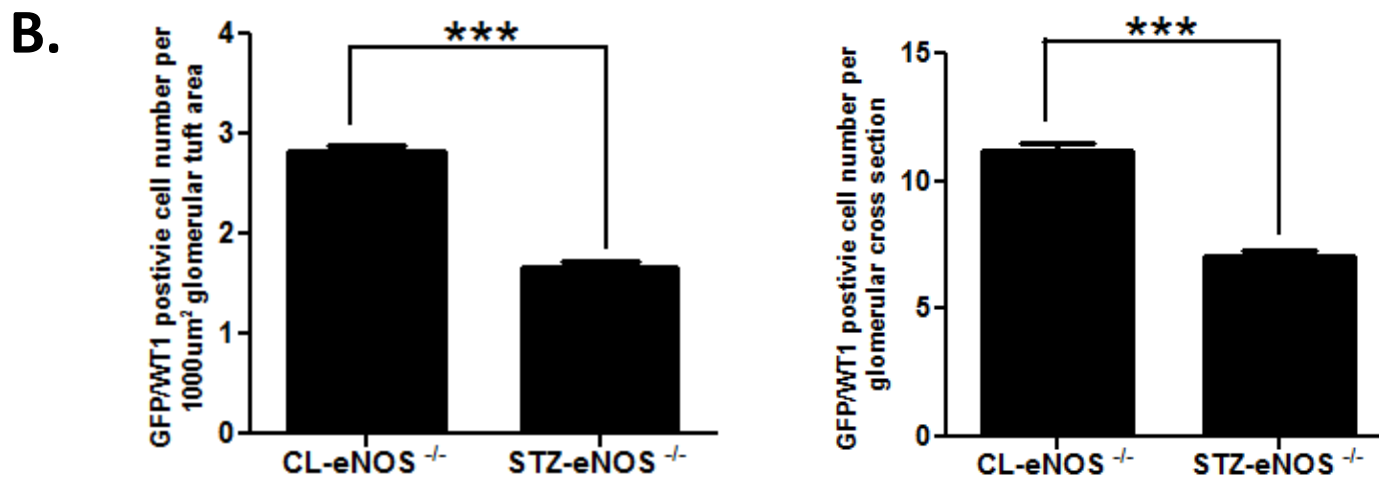
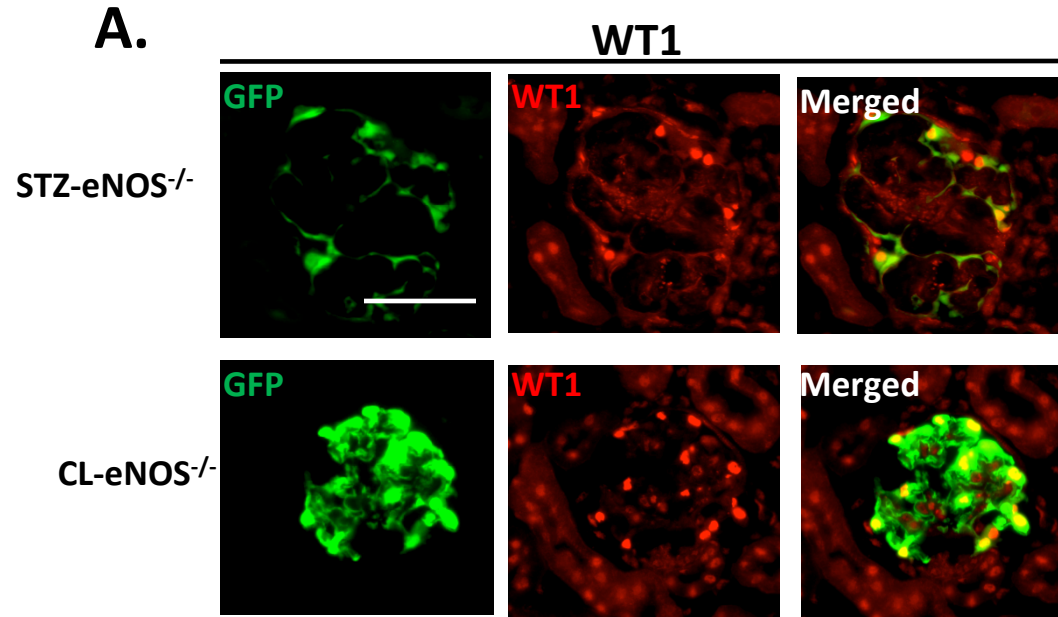
## A. Podocyte sorting process



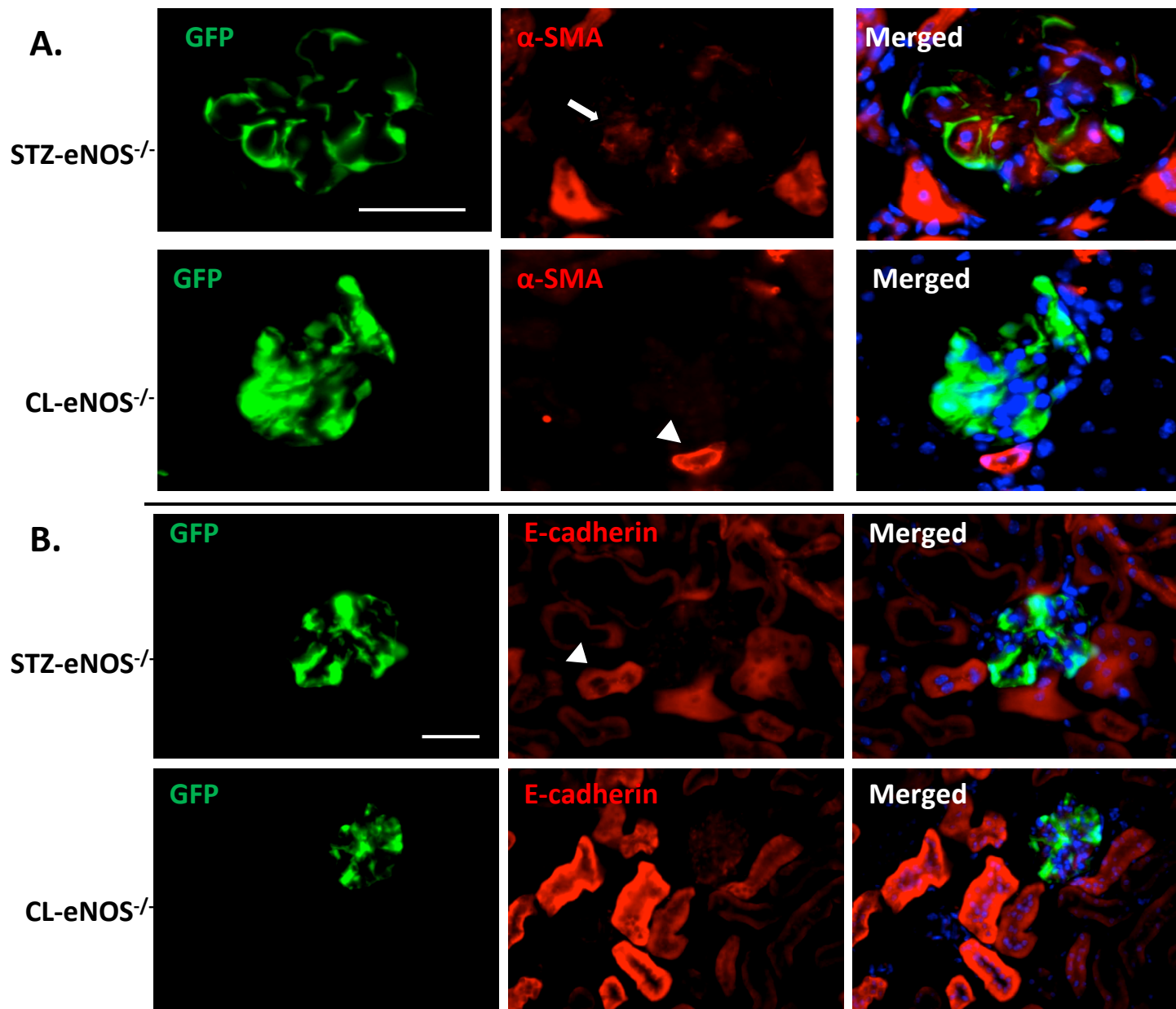
## B. Validation of podocyte marker expression in the sorted podocytes



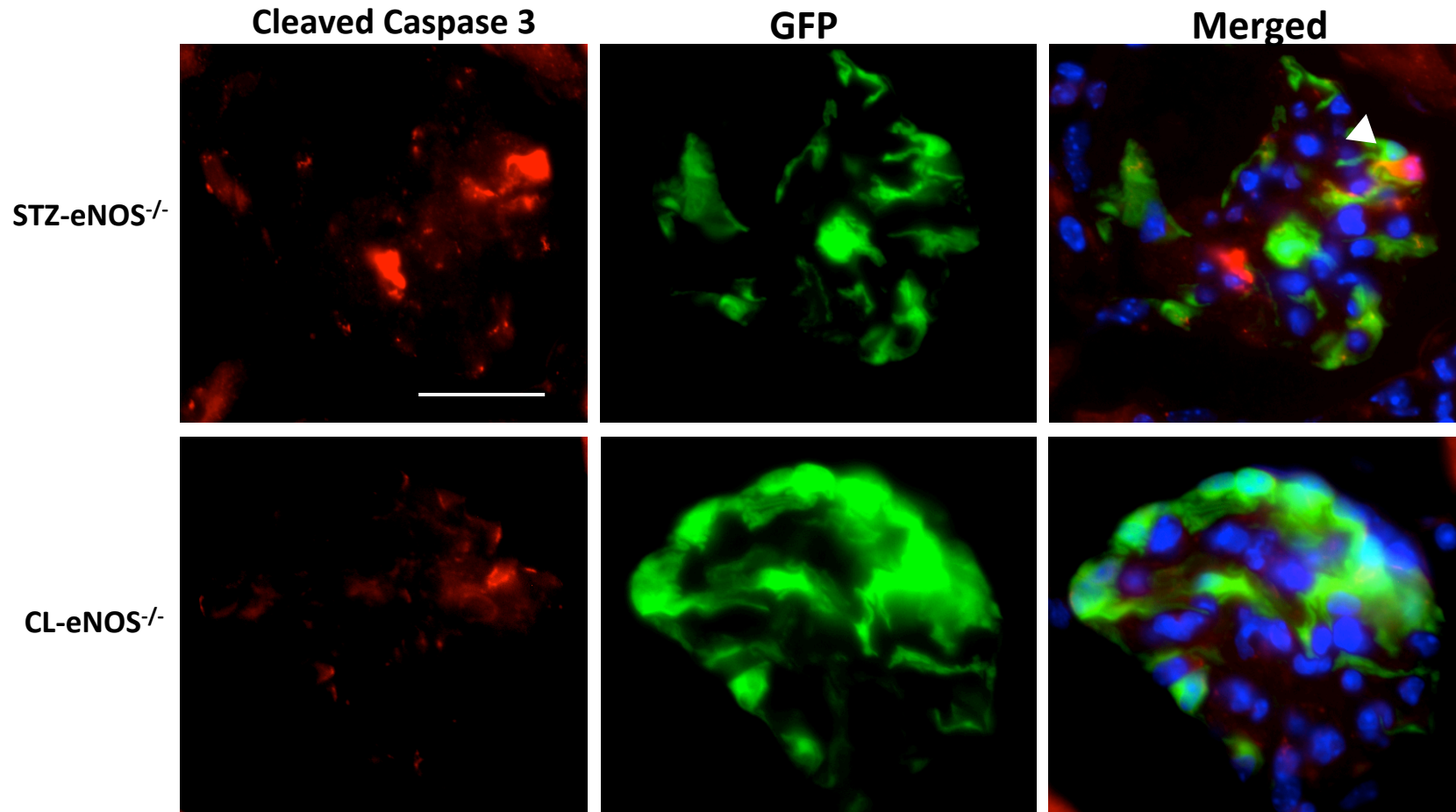
# Supplementary figure 4 (Figure S4): Podocyte number is reduced in diabetic glomeruli



# Supplementary figure 5 (Figure S5): Immunostaining for EMT-related markers

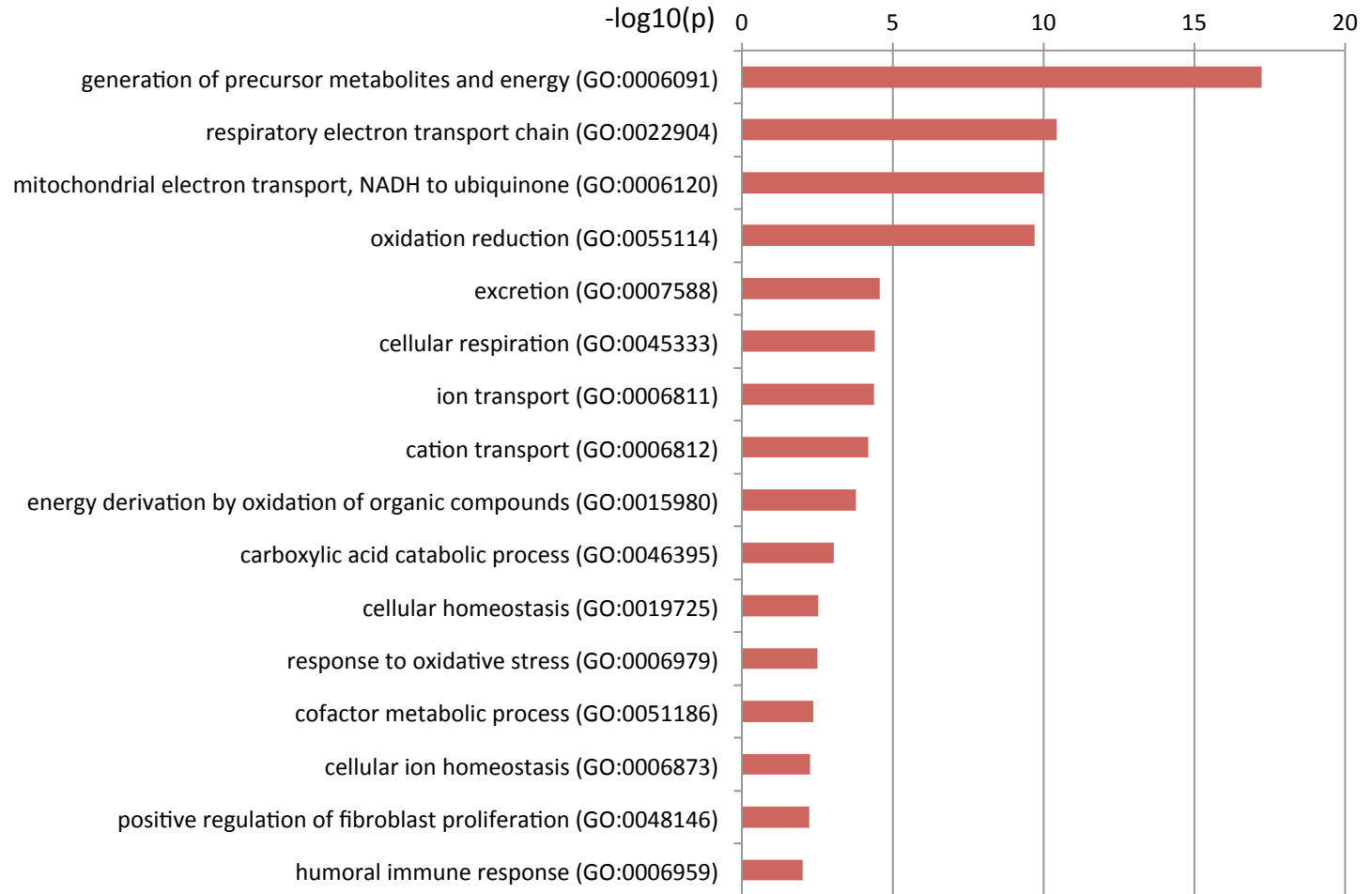


## Supplementary figure 6 (Figure S6): Immunostaining for cleaved caspase 3



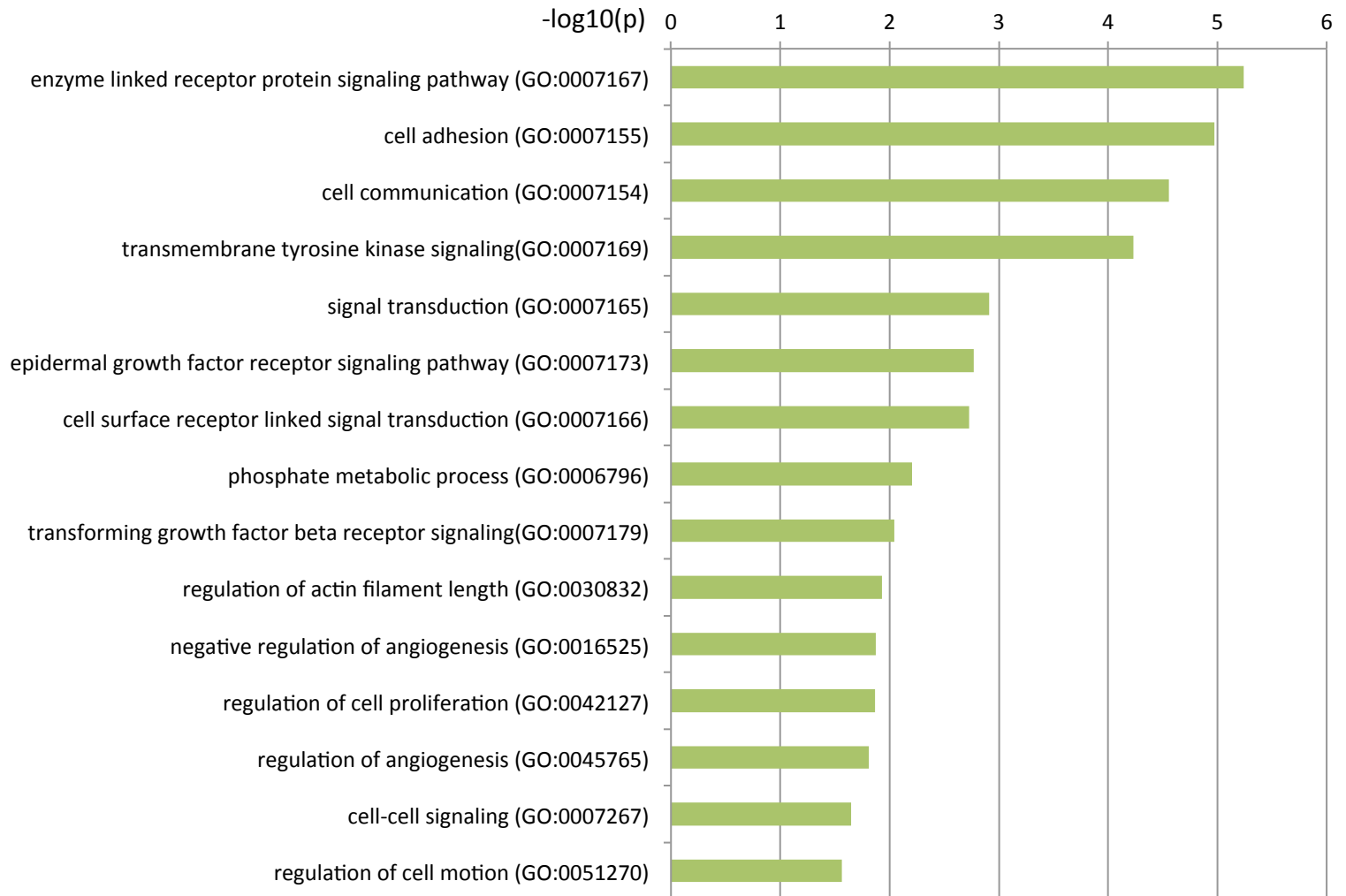
## Supplementary figure 7 (Figure S7):

### Go terms on up-regulated genes in STZ-glomeruli versus control glomeruli



## Supplementary figure 8 (Figure S8):

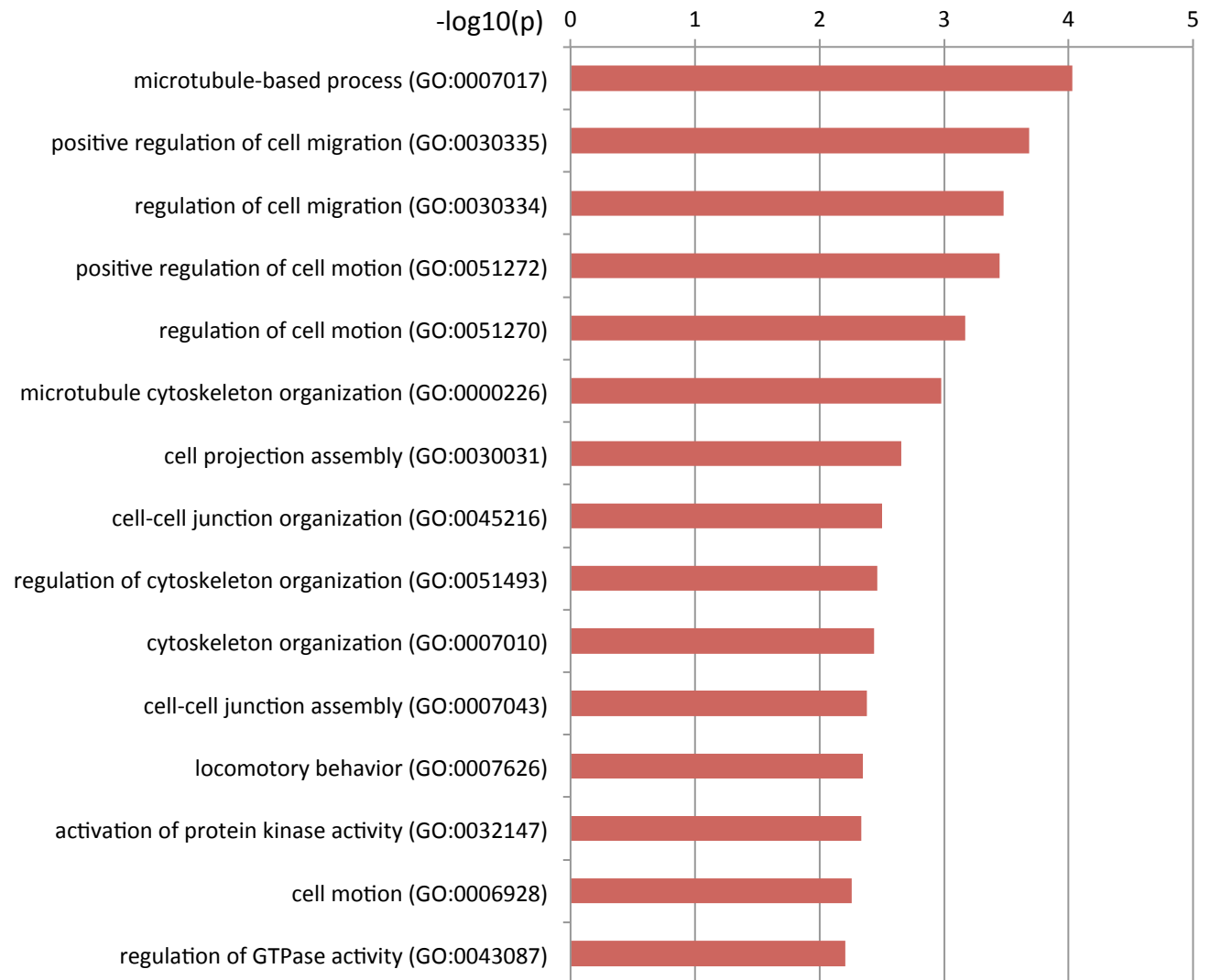
### Go terms on down-regulated genes in STZ-glomeruli versus control glomeruli



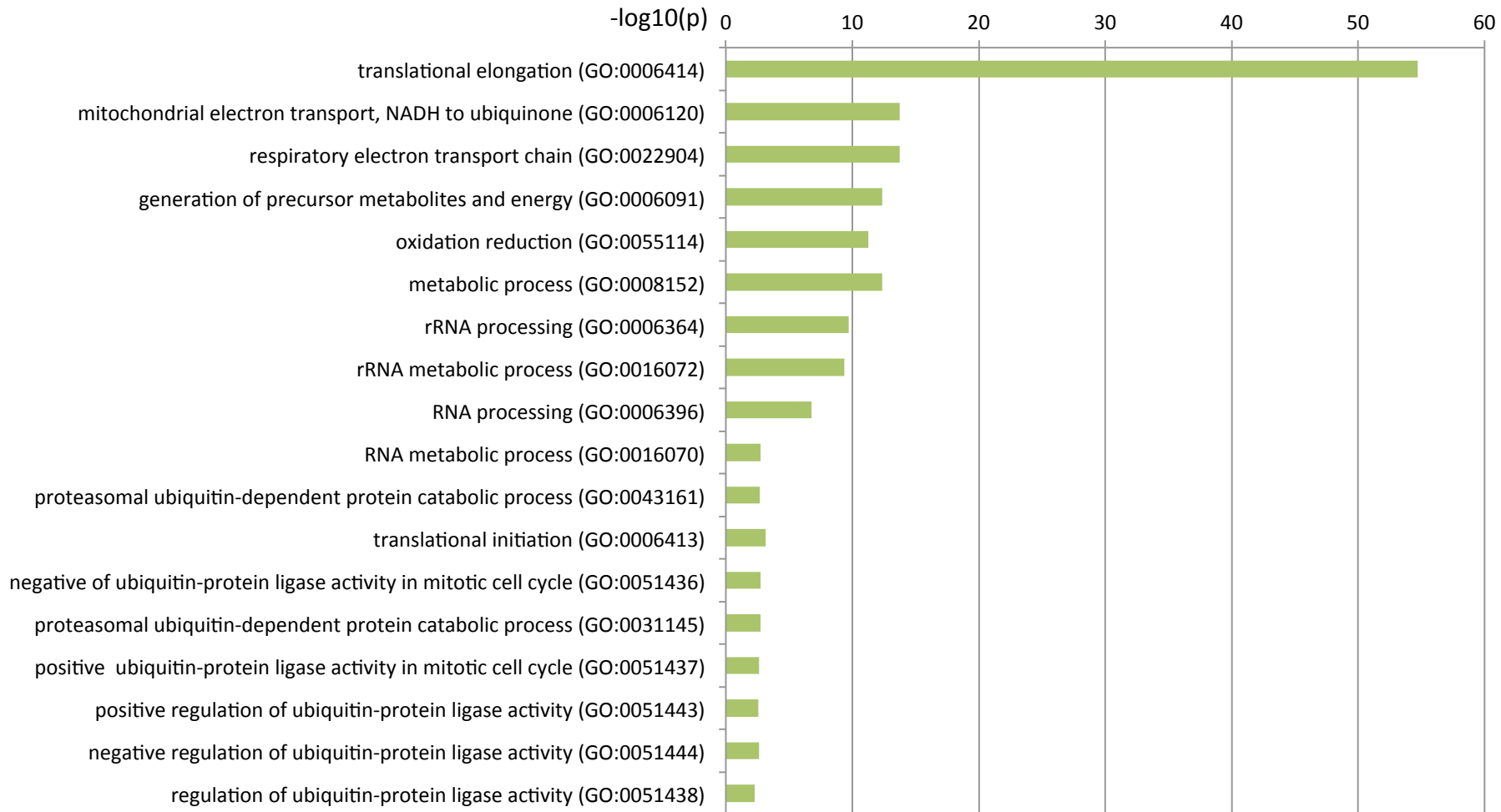


## Supplementary figure 9 (Figure S9)

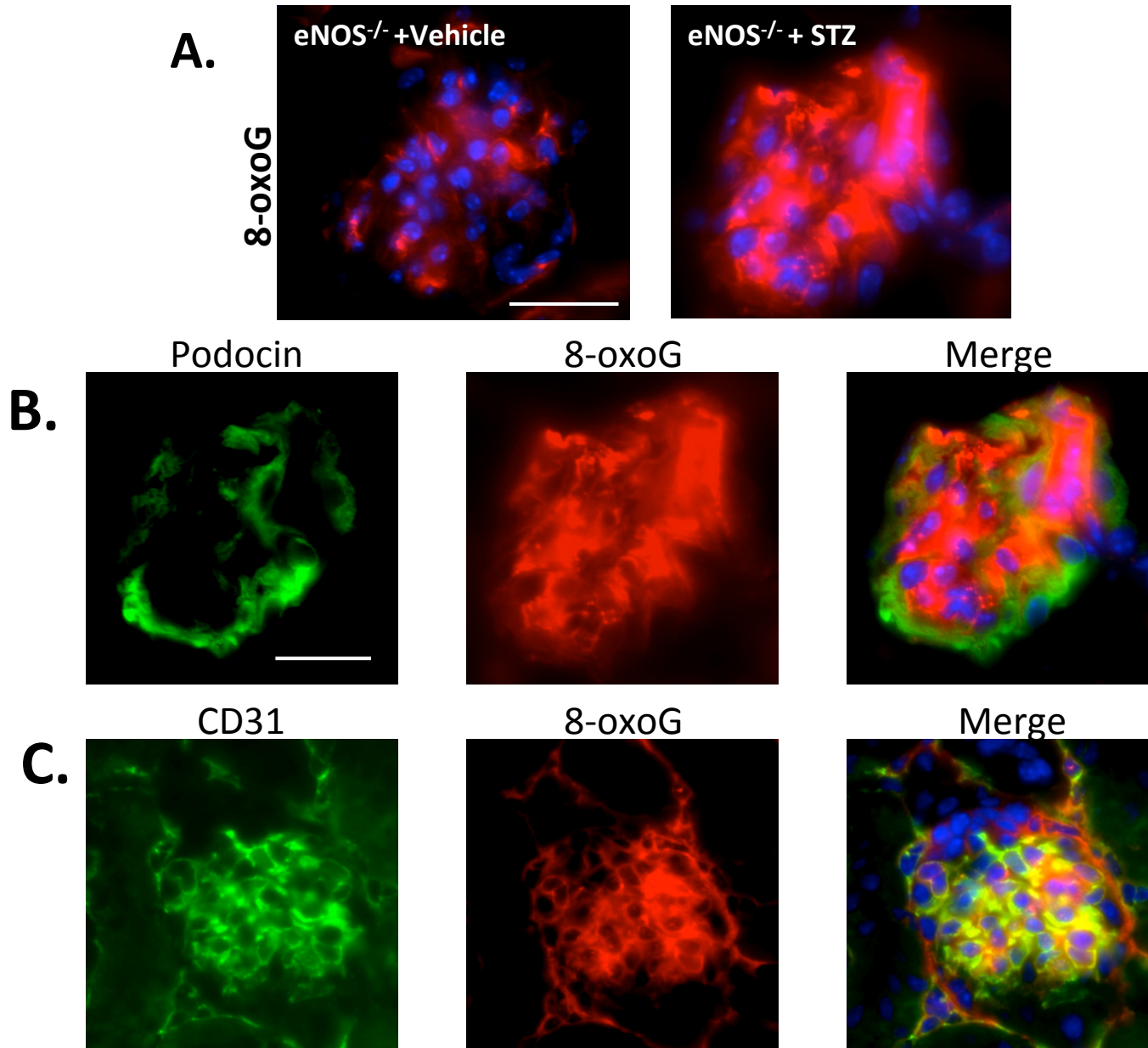
### Go terms on up-regulated genes in STZ-Podocyte versus control podocytes



## Supplementary figure 10 (Figure S10): Go terms on down-regulated genes in STZ-Podocyte versus control podocytes



**Supplementary figure11 (Figure S11): Oxidative stress was induced mostly in glomerular endothelial cells instead of podocytes in eNOS<sup>-/-</sup> diabetic mice**



## Supplementary table 1 (Table 1S): List of top 50 genes which were differentially expressed between diabetic and control mice with Fc>2

- **Glo\_Con\_Glo\_Con\_2fold\_downregulated**

- Gdf5, Steap4, Angptl7, Sox8, Kcng2, Gja3, Gzma, Snx31, Fgfbp1, Pcdh19, Ptchd4, Cacna2d2, Sstr5, 1810041L15Rik, Lrrc17, Aifm3, Samd5, Thsd7a, Vtcn1, Defb47, Astn2, Robo2, Ephb1, Grm7, Eya1, Sulf1, Gm266, Magi2, 6430531B16Rik, Steap3, Cyp26a1, Hs3st3b1, Dpysl5, C1qtnf7, Neb1, Cers6, Fgfr4, Lrrc49, Lmx1b, Gbx1, Amph, Zbtb7c, Arhgap32, Dbx1, C030030A07Rik, 6530402F18Rik, Zbtb8a, Angptl2, Dpp4, Dlgap1

- **Glo\_Con\_Glo\_Con\_2fold\_upregulated**

- Col10a1, Clec4n, Rgs1, Lcn2, Fpr1, H2-M2, P2ry13, C1qb, C1qc, Ccl2, Lpcat2b, C1qa, Mpeg1, Sostdc1, Spp1, Pigr, Fpr2, Tlr8, C3ar1, Cldn3, Fosb, Pdk4, Fam46b, Gpr65, Clec12a, S100g, Wfdc2, Mreg, Lgals3, Plcd4, Cd68, Acp5, Slc40a1, Sox9, Bcl2a1b, Mmp12, Fcgr1, Ptafr, Ctss, Kcns1, Abcg3, Atp6v0d2, Spic, Emr1, 1700091H14Rik, Calb1, Tlr1, Calml3, Nr0b2, Arhgef38

- **Podo\_STZ\_Podo\_Con\_2fold\_downregulated**

- S100g, Wfdc15b, Defb1, Gpx6, Pvalb, Fxyd2, Cldn8, Ppp1r1a, BB031773, Gm20826, Klk1, Pgam2, Kl, Ptafr, Mal, Klhl38, Tmem52b, Degs2, Paqr5, Calb1, Emx1, Efhd1, Umod, Ly6a, Sprr1a, Slc16a7, Gdf1, Cers1, Slc12a3, Sostdc1, S100a14, Clcnkb, Oog4, Gm4070, Ttc36, Glod5, Wfdc2, Sfrp1, Pdzk1ip1, 1700074H08Rik, Pkib, Tmem190, Kng2, Tmem213, 1700011H14Rik, Kcnj1, Cd2, Tmem229a, Fetub, Cldn10, Fabp3

- **Podo\_STZ\_Podo\_Con\_2fold\_upregulated**

- Tlr5, Gabrb1, Nedd9, Nlrp9a, Mgat5, Rassf8, Cdkl5, D10Bwg1379e, Mybpc2, Nt5dc3, Zdhhc11, Tmtc1, Ksr2, Olfr1444, Capsl, Agtpbp1, Fv1, Prx, Nat8l, Lrba, Lrba, Slc26a7, Rpgr, Btdb9, Nrf1, Vwa8, Tcaim, Pstpip2, Col4a6, Lims1, Zfp101, Creb3l2, Topaz1, Stk4, Mrs2, Ncam1, Pogk, Pogk, Pdlim5, Zfp72, Pcdhga10, Ipo7, 2700050L05Rik, Kpna1, Kif18a, Zfp759, Trim44, Pprc1, Amot, Gpld1

**Supplementary table 2 (Table S2): Primers for RT-PCR**

Gene	Forward	Reverse
Gapdh	5'-GCCATCAACGACCCCTTCAT-3'	5'-ATGATGACCCGTTTGGCTCC-3'
Nphs1	5'-GTGCCCTGAAGGACCCTACT-3'	5'-CCTGTGGATCCCTTTGACAT-3'
Nphs2	5'-CTTGGCACATCGATCCCTCA-3'	5'-CGCACTTTGGCCTGTCTTTG-3'
Synpo	5'-CTTTGGGGAAGAGGCCGATTG -3'	5'-GTTTTCGGTGAAGCTTGTGC-3'
Wt1	5'-GAGAGCCAGCCTACCATCC-3'	5'-GGGCCTCGTGTGTTGAAGGAA-3'
Pecam-1	5'-AGCCTAGTGTGGAAGCCAAC-3'	5'-AGCCTCCGTTCTCTTGGTG-3'
Cdh5	5'-GTGCATGCTAACACAGGGAATG-3'	5'-AATACCTGGTGCGAAAACACA-3'
Vav1	5'-TGTGAGAAGTTCGGCCTCAAG-3'	5'-CAGAGCAGACAGGGTGTAGAT-3'
Was	5'-CCAGCCGTTCAAGCAGAACAT-3'	5'-GGTTATCCTTACGAAGCACA-3'
Itgax	5'-CTGGATAGCCTTCTTCTGCTG-3'	5'-GCACACTGTGTCCGAACTCA-3'
Rac2	5'-GACAGTAAGCCGGTGAACCTG-3'	5'-CTGACTAGCGAGAAGCAGATG-3'
Pdgfa	5'-AGGTATGTATCCACACATGCGT-3'	5'-AGTTCCTGTTGGTTTCATCTCG-3'
Iqgap2	5'-TACGGCTCAATCGTGGATGAT-3'	5'-GGTGGCAATTCTTCAACTAAGCA-3'
Rock2	5'-TTGGTTCGTCATAAGGCATCAC-3'	5'-TGTTGGCAAAGGCCATAATATCT-3'
Ndufb5	5'-CAAGAGACTGTTTGTGTCGAAGC-3'	5'-TGTTCAACAGTGTTATGCCAAT-3'
Ndufb6	5'-GTCTTTAAGGCGTACCGCTC-3'	5'-CTGGGCTTCGAGCTAACAATG-3'
Ndufs6	5'-TTCGGGGTTCAAGTGTGCGC-3'	5'-CACAGGCTGTTGTGCTATCAA-3'
Ndufs4	5'-TCCTTTGATGGGTTGGGCAT-3'	5'-GACTTGGACTTGGGTTTCGG-3'
Pax2	5'-AAGCCCGGAGTGATTGGTG-3'	5'-CAGGCGAACATAGTCGGGTT-3'
Cyb5rl	5'-TAATCAAGTGCTACCGGACTGG-3'	5'-CGCCGTA CTCTTTGGTTCAT-3'
Nnt	5'-GGGTCAGTTGTTGTGGATTTAGC-3'	5'-GCCTTCAGGAGCTTAGTGATGTT-3'

Gene	Forward	Reverse
Bax	5'-TGAAGACAGGGGCCTTTTTG-3'	5'-AATTCGCCGGAGACACTCG-3'
Cdc40	5'-TGTCATCTGTGAAAAGGTGGTC-3'	5'-ACTGGAGCAGCGGTGTTATG-3'
Bid	5'-GCCGAGCACATCACAGACC-3'	5'-TGGCAATGTTGTGGATGATTTCT-3'
Dapk1	5'-ATGACTGTGTTTCAGGCAGGAA-3'	5'-CCGGTACTTTTCTCACGACATTT-3'
Acta1	5'-TACCACCGGCATCGTGTTG-3'	5'-GCGCACAAATCTCACGTTTCAG-3'
Col1a1	5'-GCTCCTCTTAGGGGCCACT-3'	5'-CCACGTCTCACCATTGGGG-3'
Fn1	5'-GATGTCCGAACAGCTATTTACCA-3'	5'-CCTTGCGACTTCAGCCACT-3'
Cdh1	5'-CAGGTCTCCTCATGGCTTTGC-3'	5'-CTCCGAAAAGAAGGCTGTCC-3'