

Supplementary Information

Title: A transcriptional network underlies susceptibility to kidney disease progression

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Supplementary Table 1: Transcription factors located in the *Ckdp1* confidence interval. Their potential binding activity to TGF- α promoter is indicated.

Gene ID	Potential binding to TGF- α
Atho8	Not
Tcf3	Yes
AW146020	Not
Tlx2	Not
Lbx2	Not
Ankrd53	Not
Emx1	Not
Noto	Not
Egr4	Not
NP_001032931.1	Not
Cml3	Not
Figla	Not
Mxd1	Not
Gmcl1	Not
Cnbp	Not
Gata2	Not
Abtb1	Not
Klf15	Not
Nr2c2	Not
Mitf	Yes
Foxp1	Not
Rybp	Not
Bhlhb2	Yes

Supplementary Table 2: Fine mapping of the *Ckdp1* locus in G2 progeny.

Markers	Position		Discordance %	Fisher's test P-value
	cM	Mbp		
<i>D6Mit138</i>	0.7	4.5	41.7	0.5391
<i>rs13478669</i>	15.0	26.0	34.0	0.1410
<i>D6Mit123</i>	29.0	56.9	30.6	0.0637
<i>D6Mit209</i>	32.5	75.5	20.4	0.0029
<i>D6Mit100</i>	37.0	92.0	24.5	0.0119
<i>rs30663147</i>	40.0	97.8	19.1	0.0022
<i>rs31000275</i>	45.0	105.6	22.7	0.0142
<i>D6Mit328</i>	49.3	112.7	26.5	0.0220
<i>rs29871587</i>	60.0	129.0	29.8	0.0597
<i>D6Mit373</i>	74.3	147.0	38.8	0.3100

Discordance indicates the percentage of animals for which the observed phenotype did not fit with the expected one. In red, the peak of the linkage. Of note, the *rs30663147* marker corresponds to the G/A polymorphism.

Supplementary Table 3: List of the primers used in the different experiments

	Forward	Reverse	PCR product size (bp)
Mouse MITF-A 5'UTR			
	S1: 5'-CCCAGGCGGAACCACAA-3'	R1: 5'-GGTGGTGGGCACGCTGAC-3'	490
	S2: 5'-CCTCCCGCTCTGGTGTGAGA-3'	R2: 5'-TGTCTGACTCACGGCCACTC-3'	502
		R3: 5'-TCCCTCTTGCCCGCCTTC-3'	
Mouse TGF-α promoter luciferase reporter			
	5'-CTAGCAGACCAGCCCGATCAGT-3'	5'-ACCCGCCTCTCTTCTGTTCTCC-3'	3330
Mouse MITF-A construct (B6D2F1 or FVB/N)			
cDNA	5'-TCTCAGGTGCCCCGGGTTC-3'	5'-CTGAAGAGAGGGAGCGGTC-3'	1669
Genomic DNA	5'-CCCAGGCGGAACCACAAA-3'	5'-AGTCGTCTGTAAGCGGGACCCTA-	470
cDNA MITF-A construct for antibody production			
	5'-TCCCCCGGGTGGAGCCATGCAGTC CGAAT-3'	5'- AGTTTAGCGGCCGCTTGCTCTTC AGCGGTTC-3'	104
Real-time RT-PCR			
Human TGF- α	5'-GAGCCCAGAGGAGGAGTTTG-3'	5'-CGTGGTCCGCTGATTTCTT-3'	218
Mouse TGF- α	5'-GCCCAGATTCCCACACTCAG-3'	5'-CACGGCACCCTCACAGTG-3'	124
Mouse MITF-A	5'-GGAGCCATGCAGTCCGAA-3'	5'-AGCGGTTGACTTTTGAGTTCG-3'	92
Mouse GAPDH	5'-TGCACCACCAACTGCTTAG-3'	5'-GGATGCAGGGATGATGTTC-3'	177
β -gal	5'-GCGGCGAGTTGCGTGACTAC-3'	5'-GCGCTCCACAGTTTCGGGTT-3'	340
DNA binding assay			
E-box	5'-CTGCTCTGCACGTGTTCCAGTC-3'		
HNF1	5'-AGTTACTTATTGACT-3'		
NF κ B	5'-TATGTCTGGGGAATTCCAGCTCC-3'		
Chromatin immunoprecipitation assay			
Mouse TGF- α	5'-TCTCTACAGCCCCACAAATTAT-3'	5'-CATCCCTTCCTACACTGACTA-3'	394
Mouse α -SMA-2	5'-AGGAAAATCAGATCCCCTGGA-3'	5'-AGGTGGCTCACTACCACCTGTAA-	52