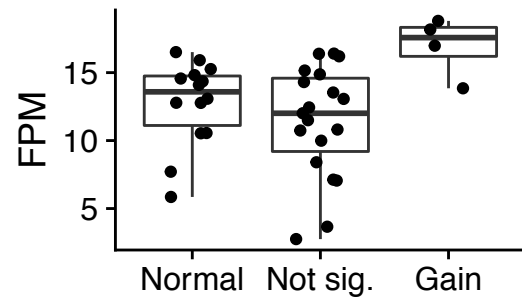


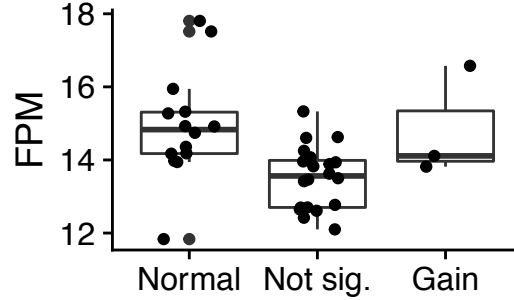
chr11:1224308–1224808

MUC5B (Promoter), $p = 2.22e-16$



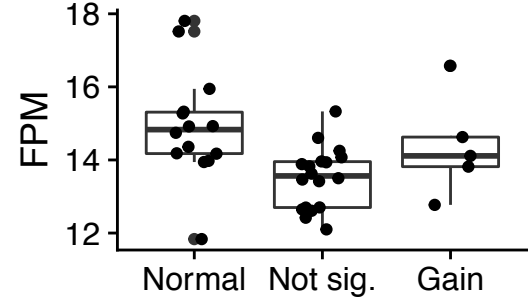
chr19:50215130–50215630

MYH14 (Enhancer), $p = 2.22e-16$



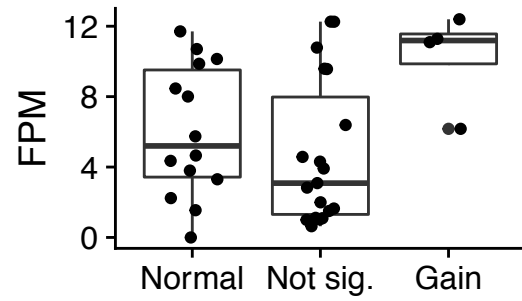
chr19:50203299–50203799

MYH14 (Promoter), $p = 2.22e-16$



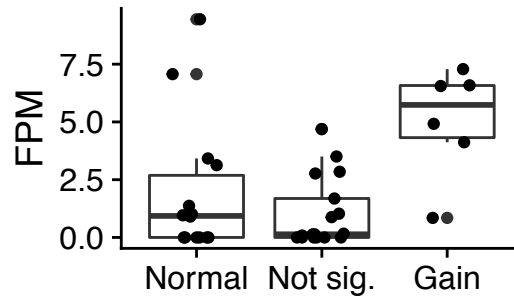
chr1:62194555–62195055

L1TD1 (Promoter), $p = 2.22e-16$



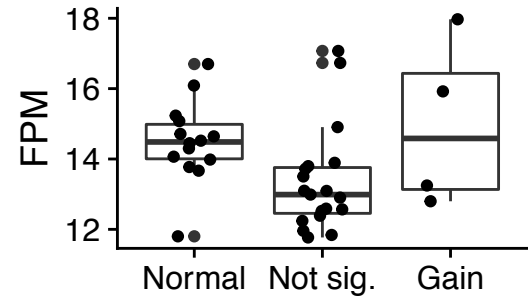
chr19:55146766–55147266

TNNT1 (Promoter), $p = 5.8738e-15$



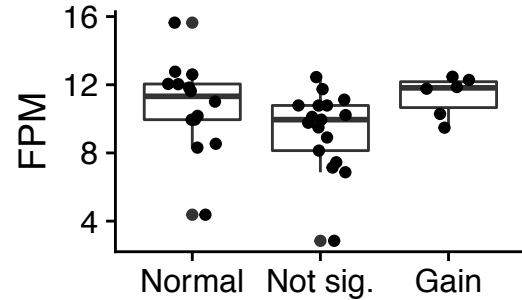
chr8:143905959–143906459

PLEC (Enhancer), $p = 8.2225e-13$



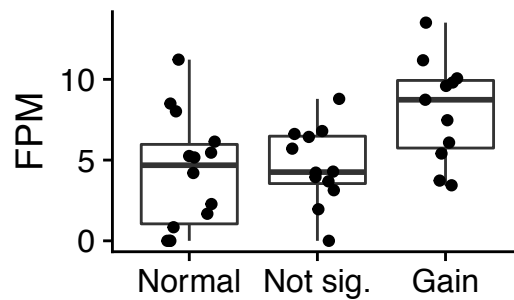
chr20:51628882–51629382

ATP9A (Enhancer), $p = 1.5388e-12$



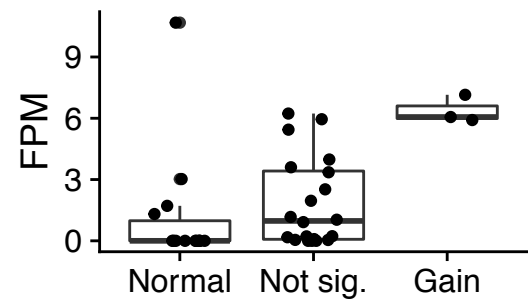
chr20:62349878–62350378

LAMA5 (Promoter), $p = 2.1055e-12$



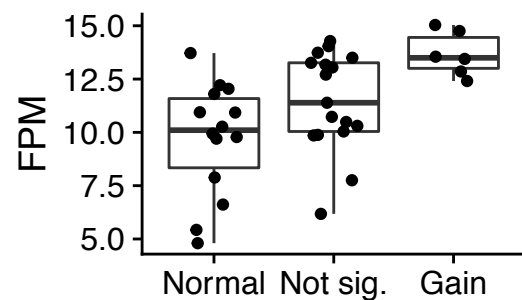
chr6:10383372–10383872

TFAP2A (Enhancer), $p = 2.2918e-11$



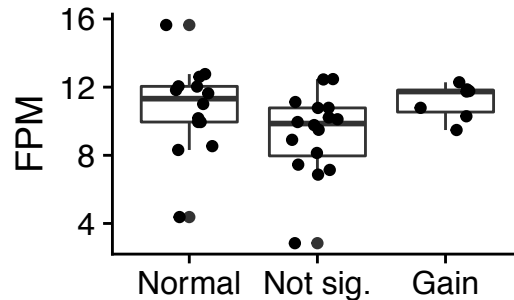
chr20:9067529–9068029

PLCB4 (Promoter), $p = 8.6543e-11$



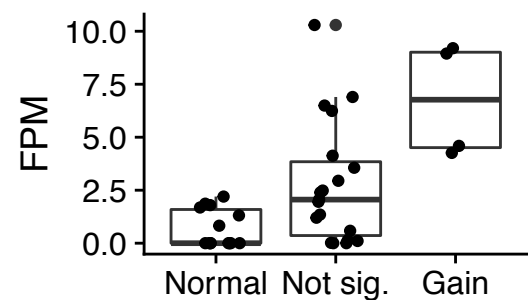
chr20:51767021–51767521

ATP9A (Promoter), $p = 2.9309e-10$



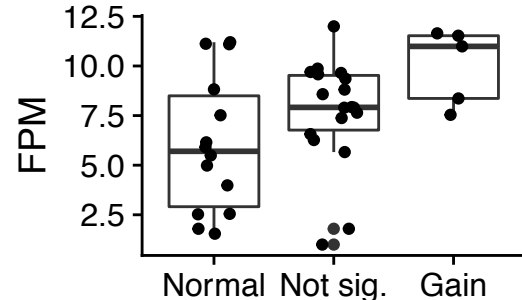
chr9:84340542–84341042

SLC28A3 (Promoter), $p = 3.7292e-10$



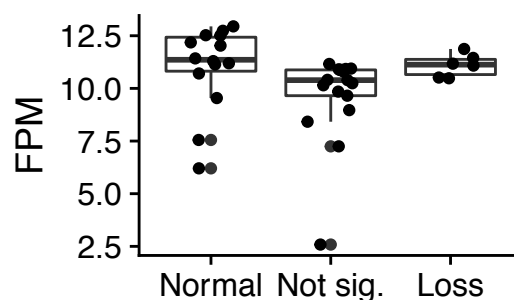
chr13:112872812–112873312

ATP11A (Promoter), $p = 8.4071e-10$



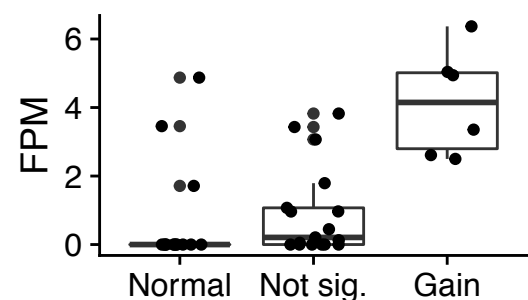
chr1:26743976–26744476

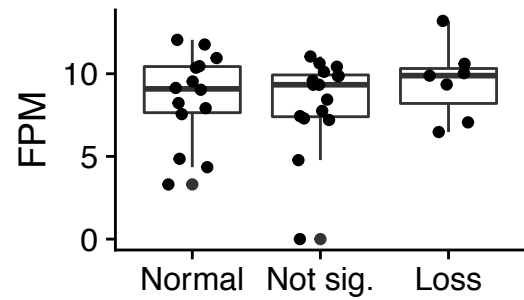
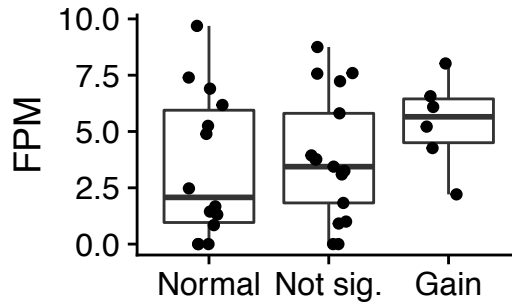
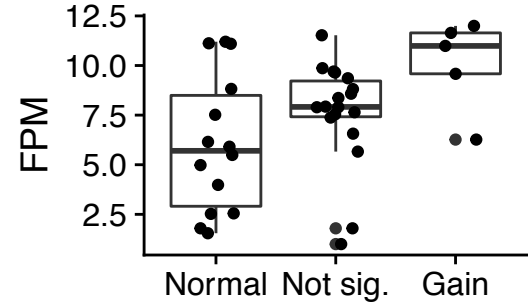
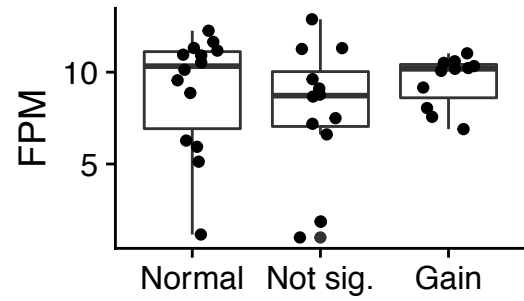
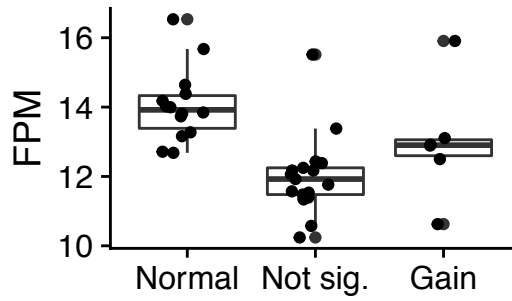
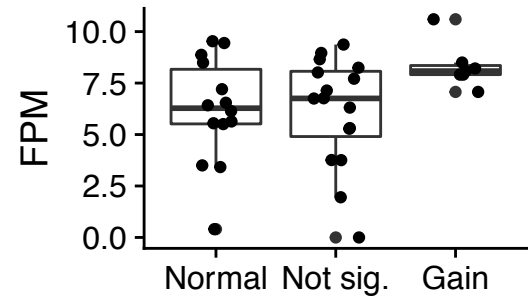
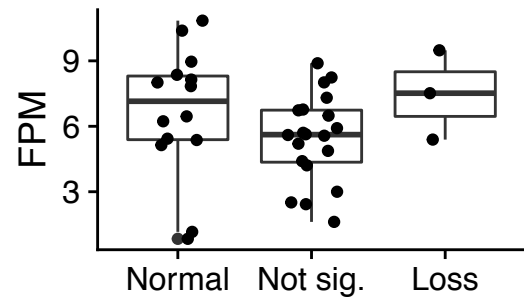
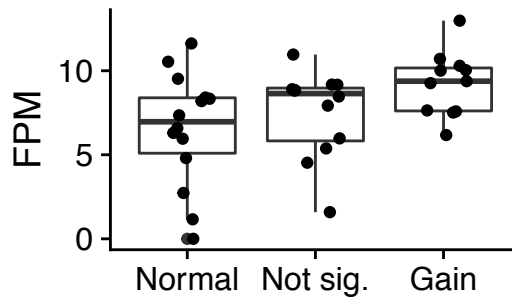
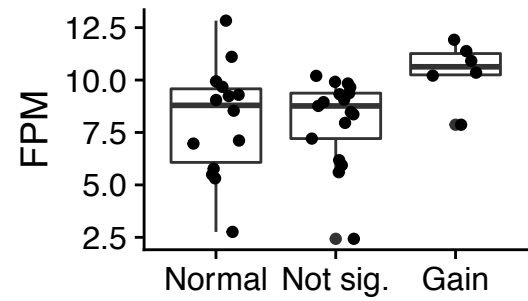
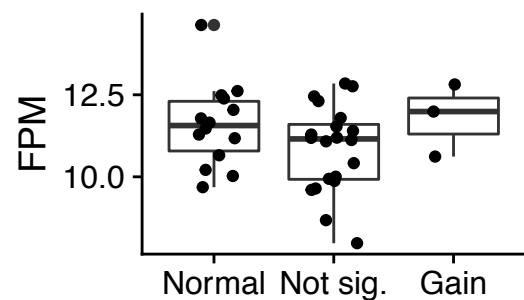
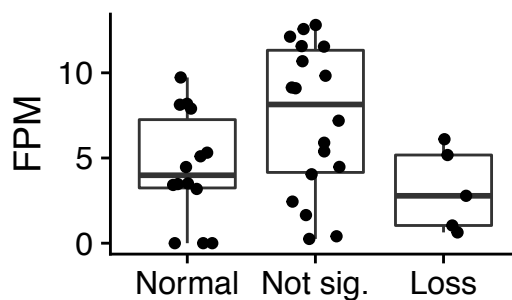
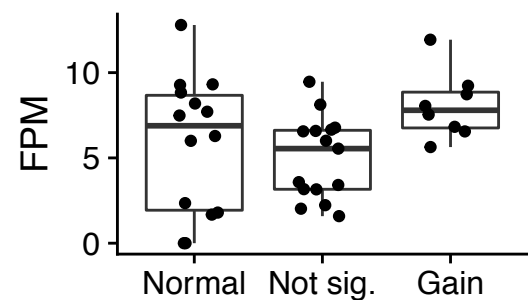
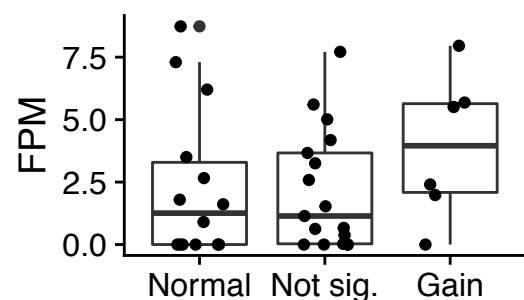
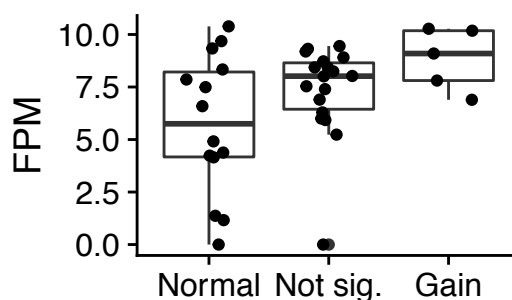
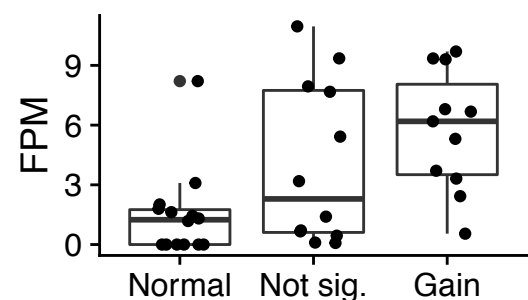
ARID1A (Enhancer), $p = 1.0993e-09$

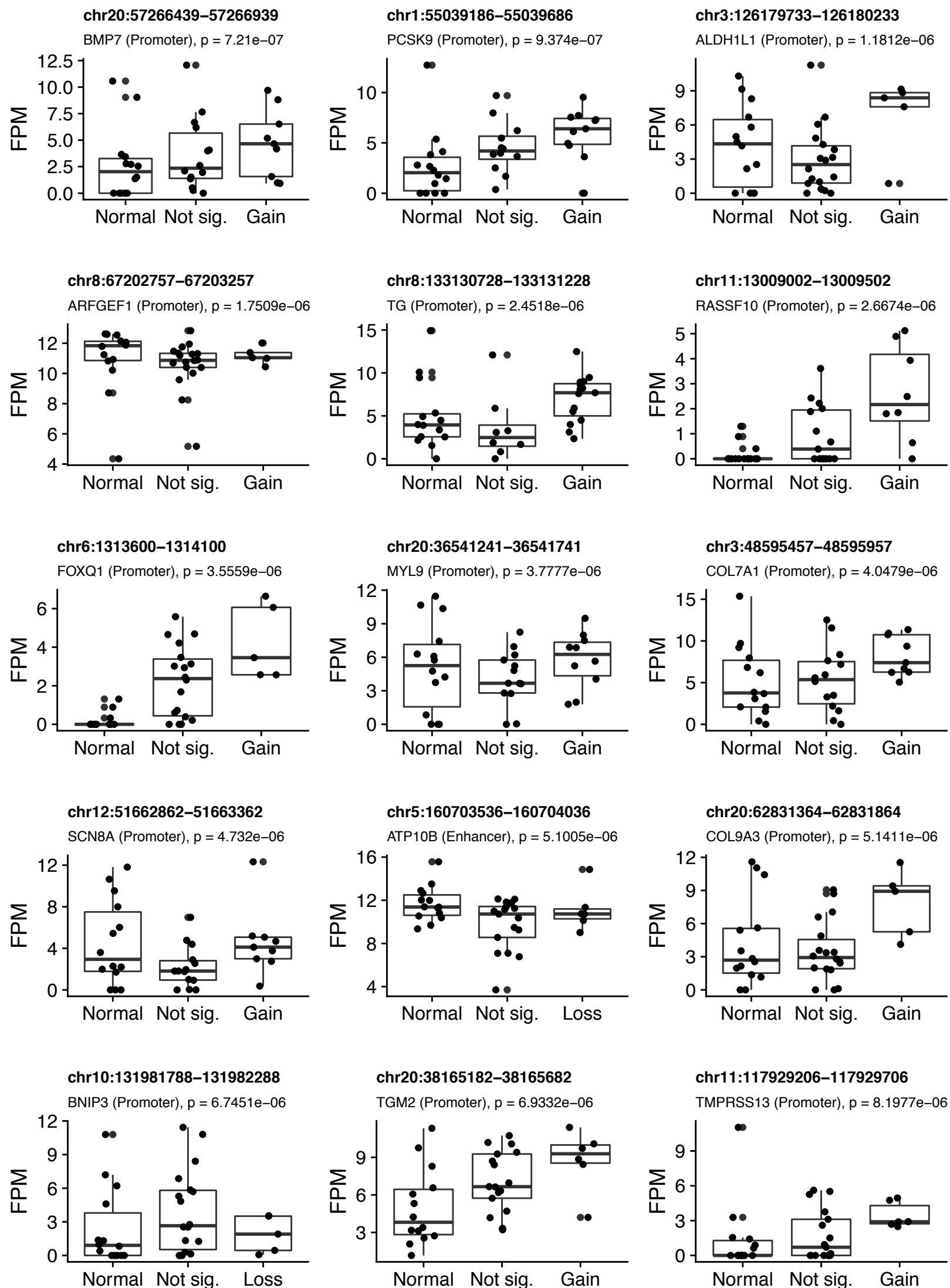


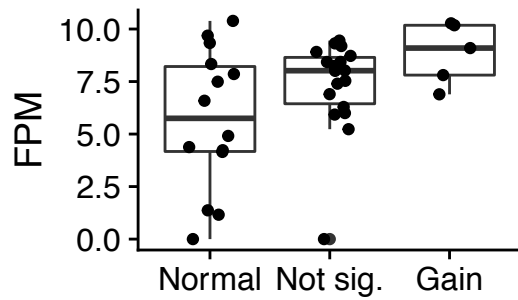
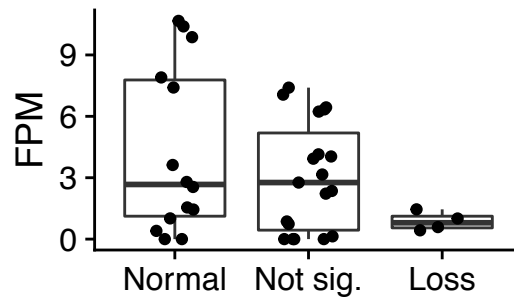
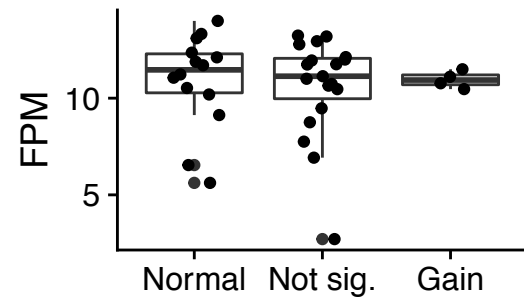
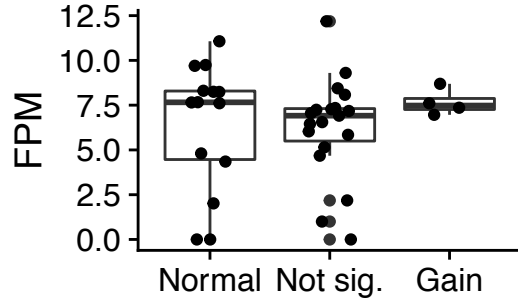
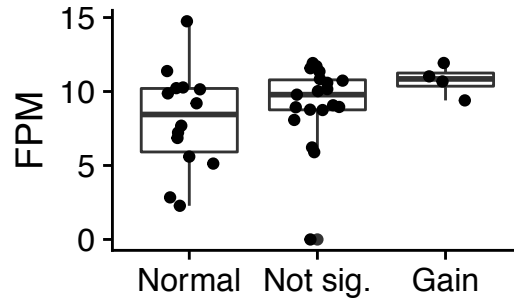
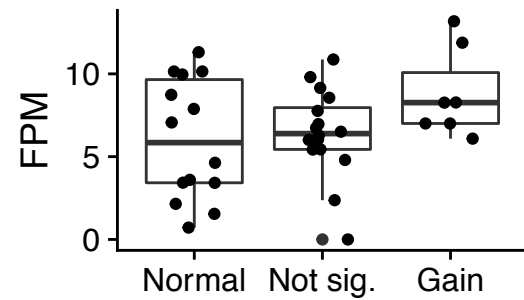
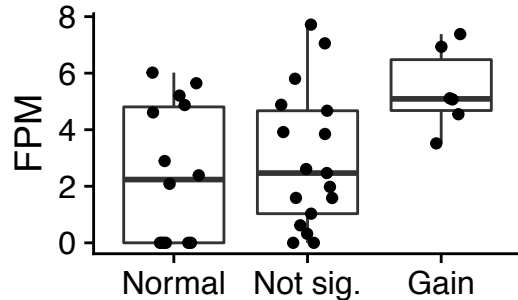
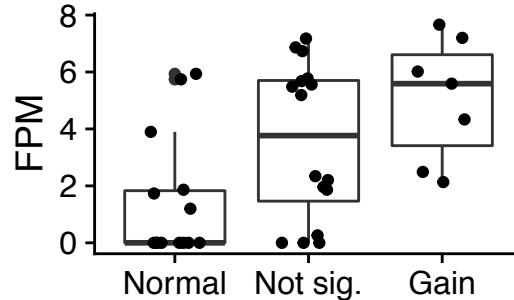
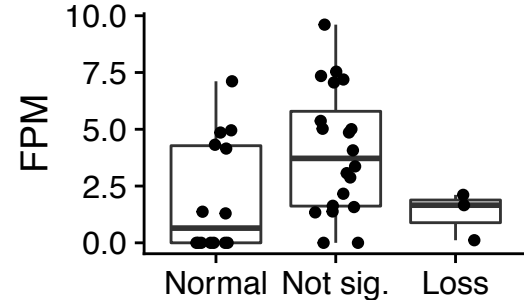
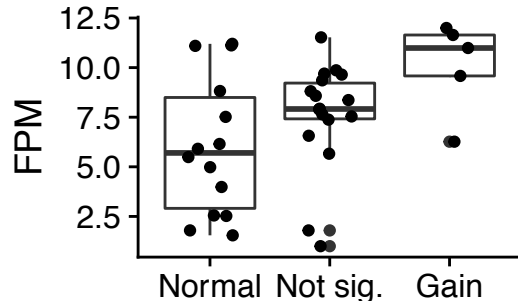
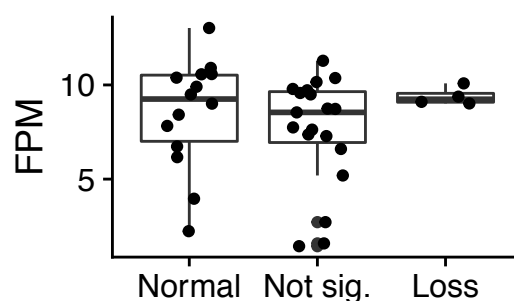
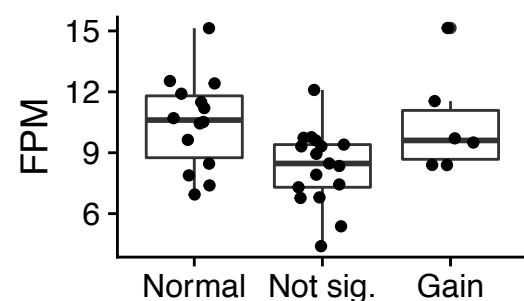
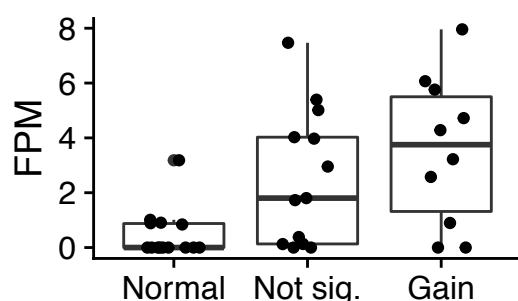
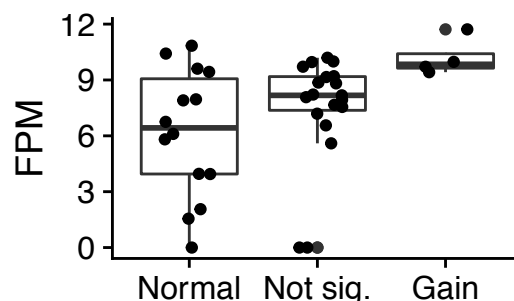
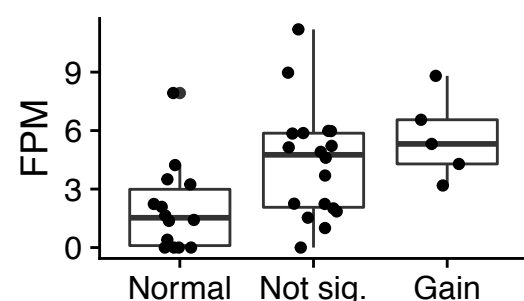
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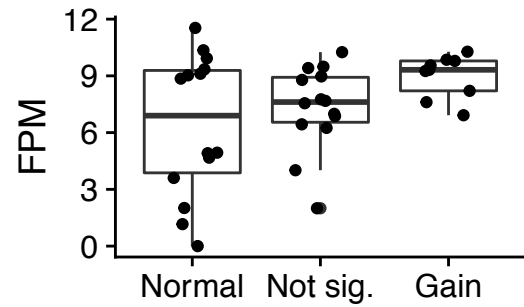
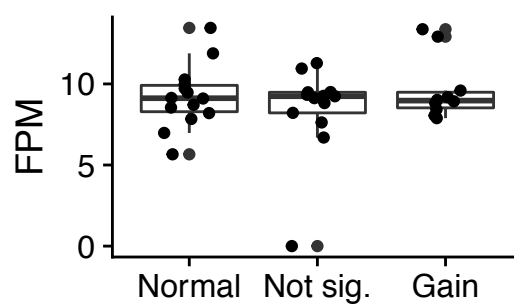
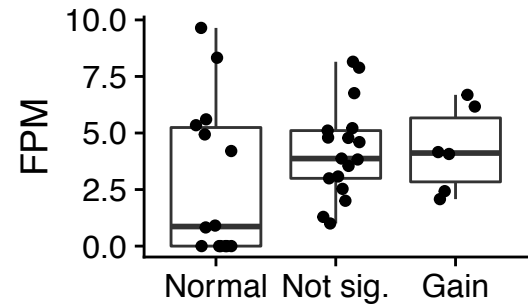
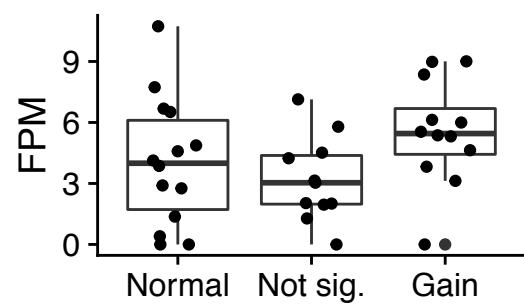
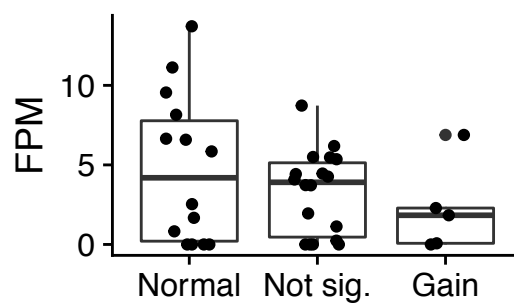
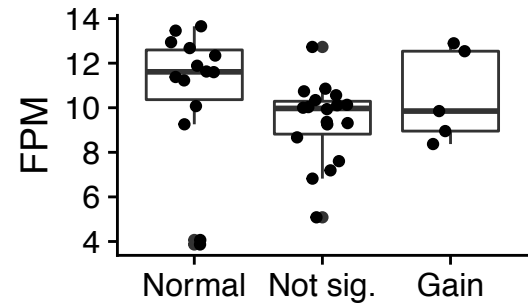
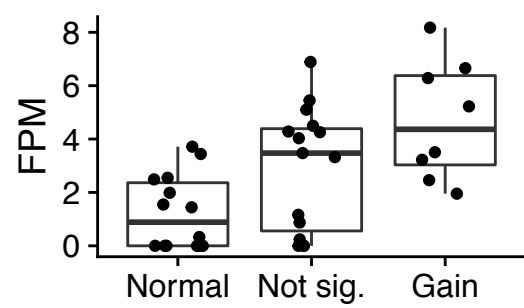
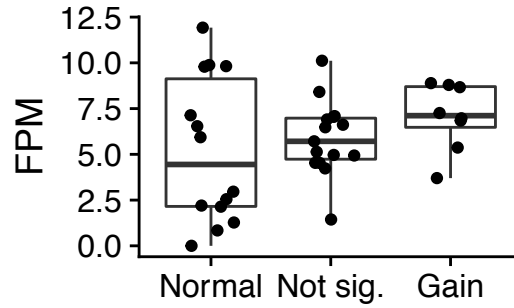
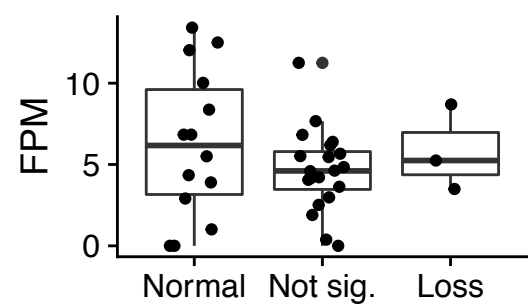
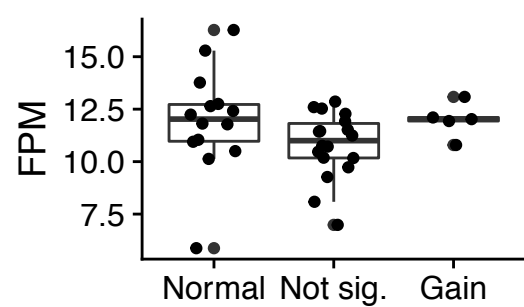
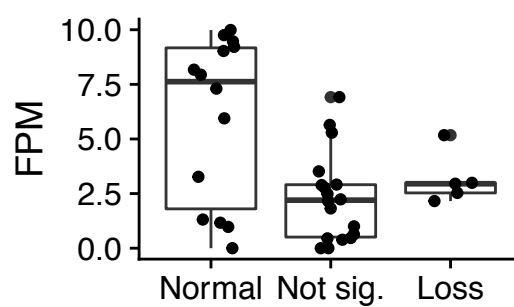
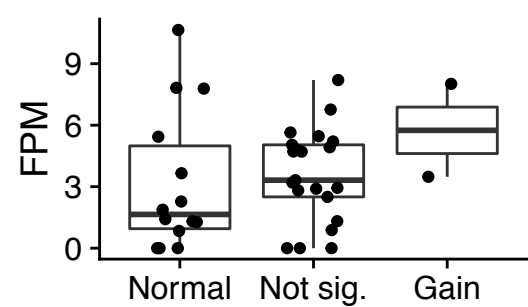
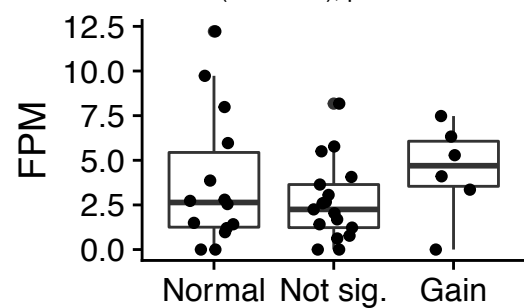
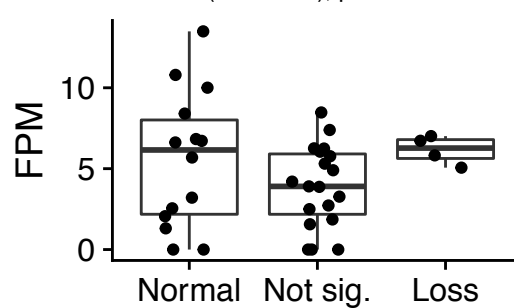
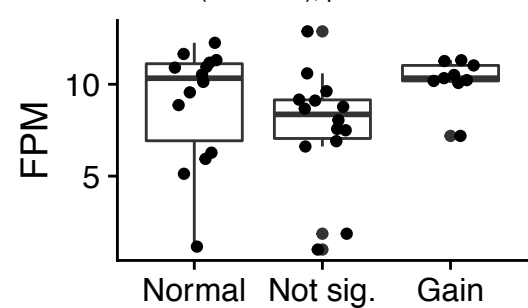
TBX20 (Promoter), $p = 1.279e-09$

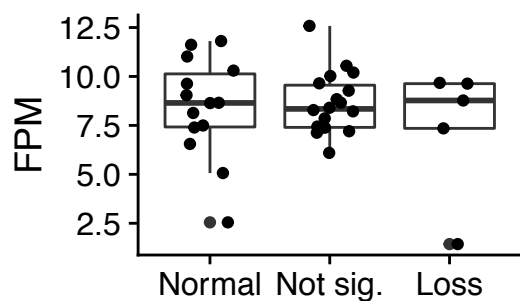
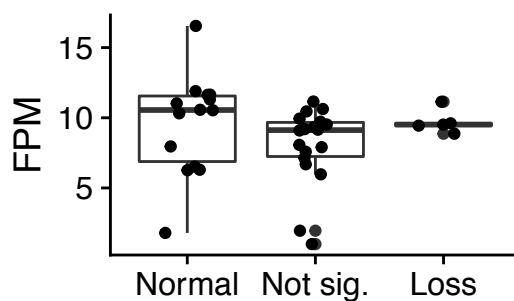
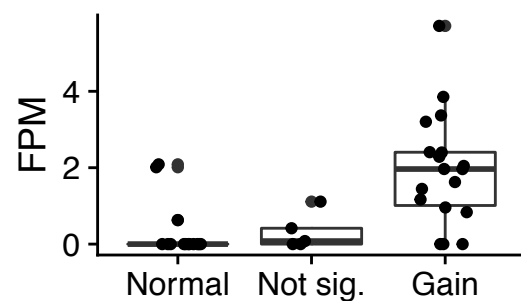
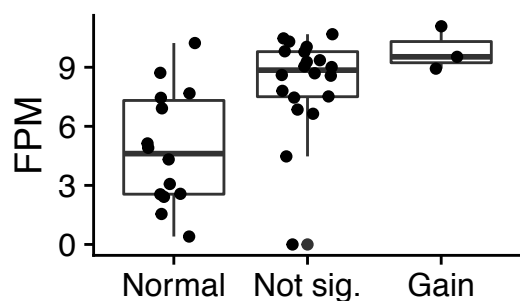
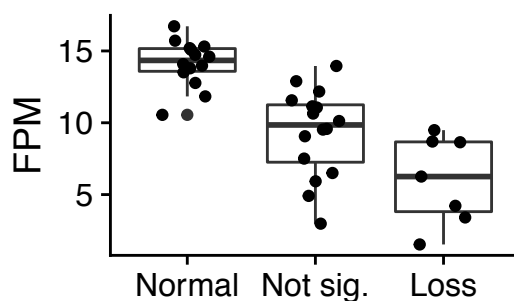
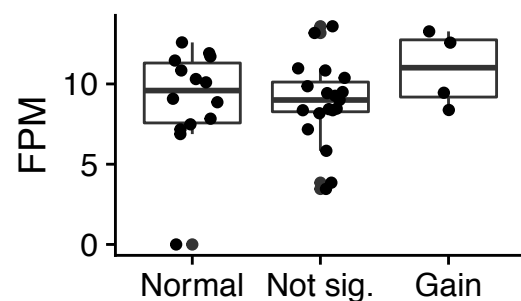
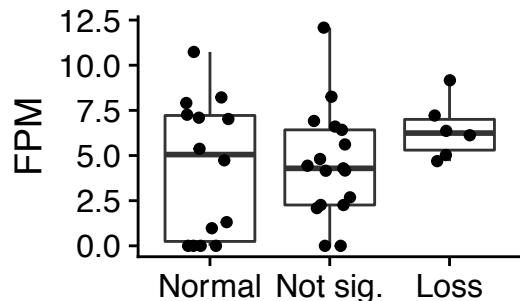
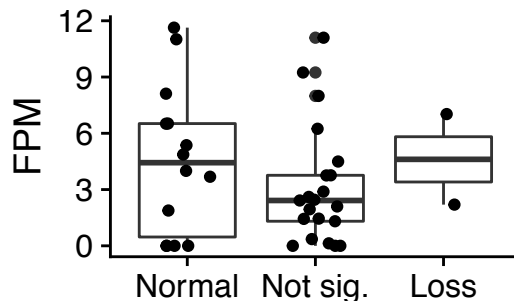
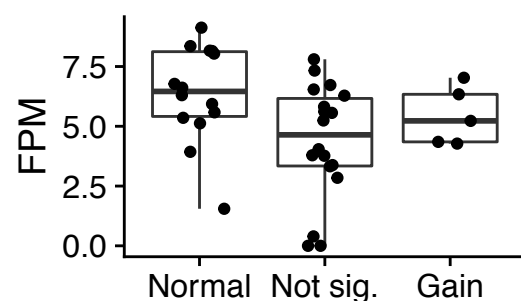
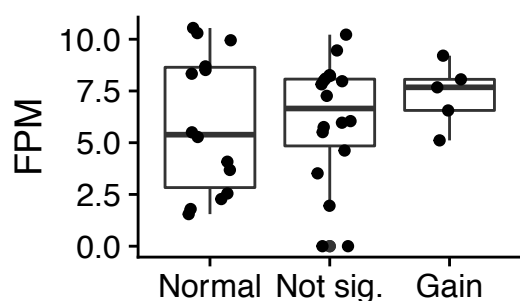
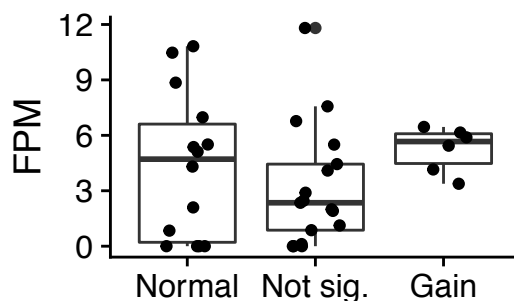
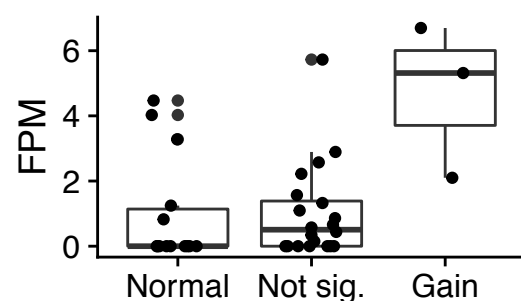
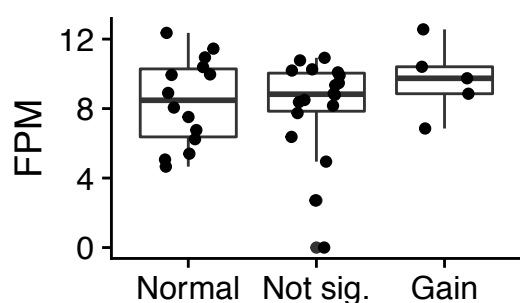
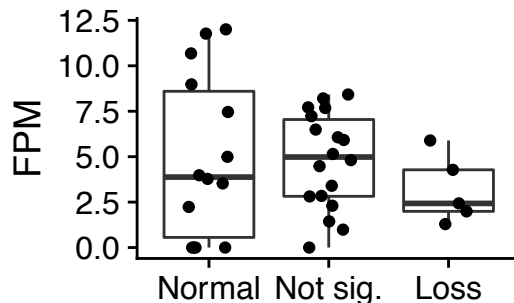
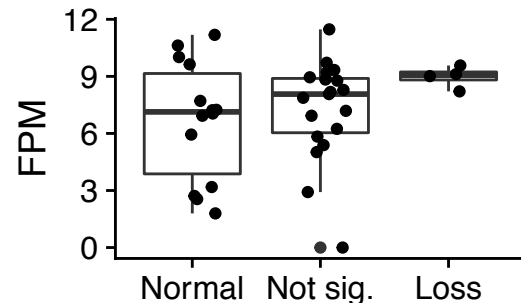


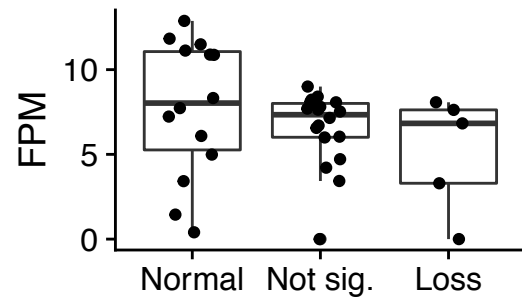
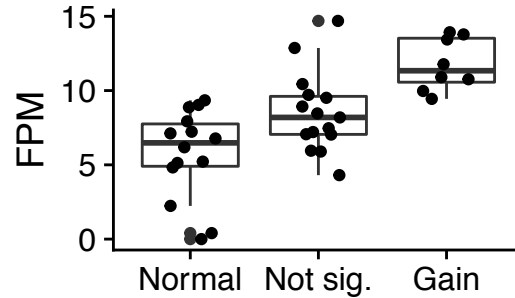
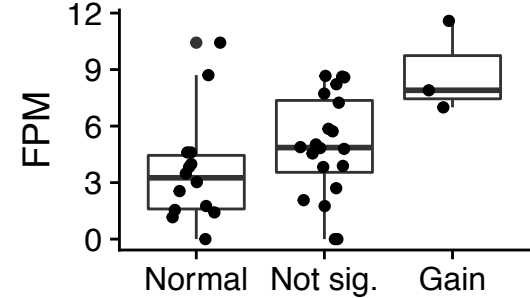
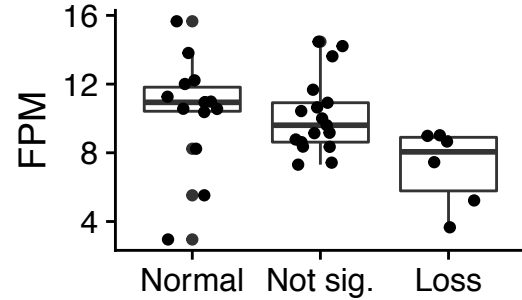
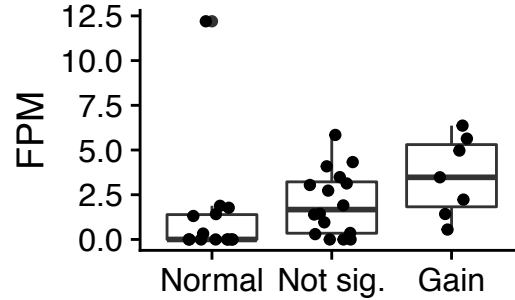
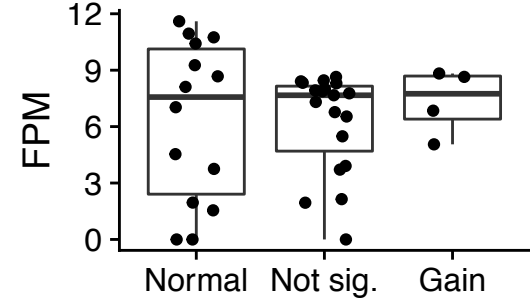
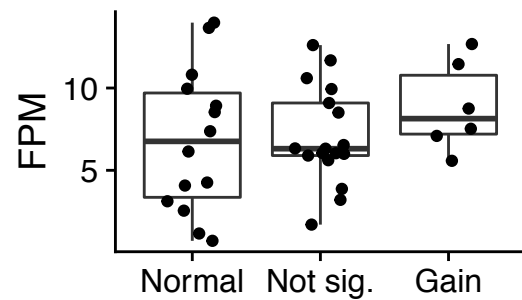
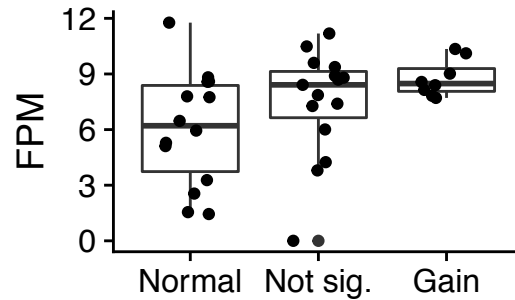
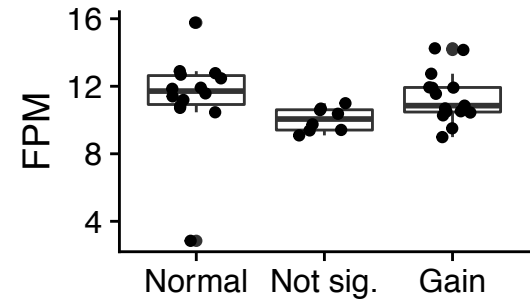
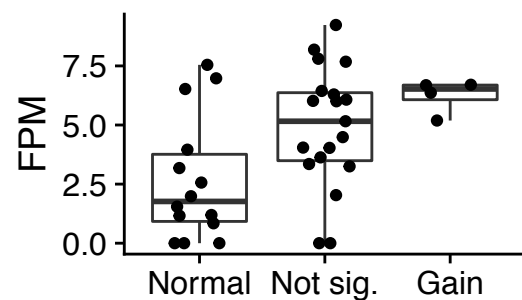
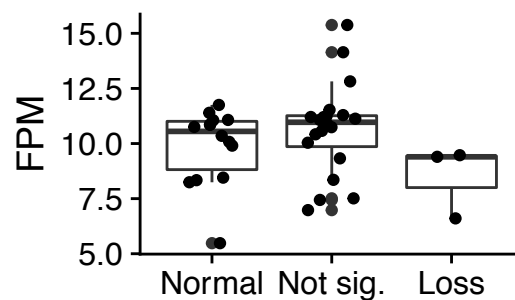
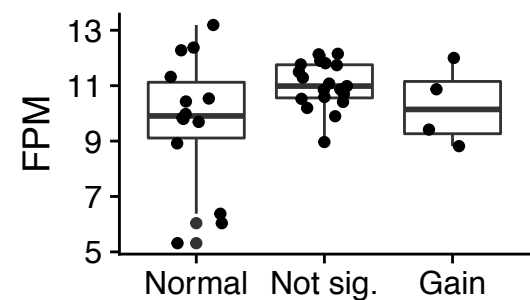
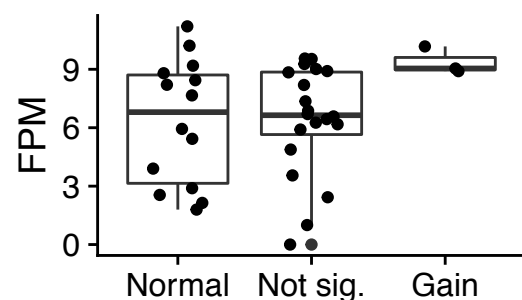
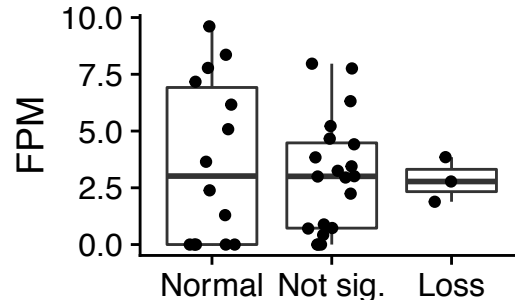
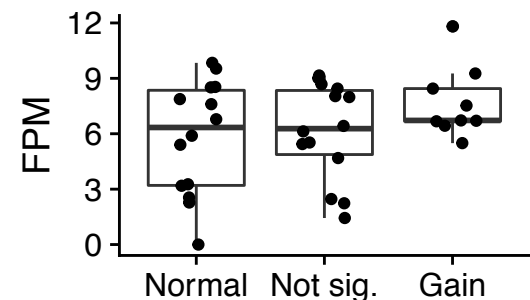
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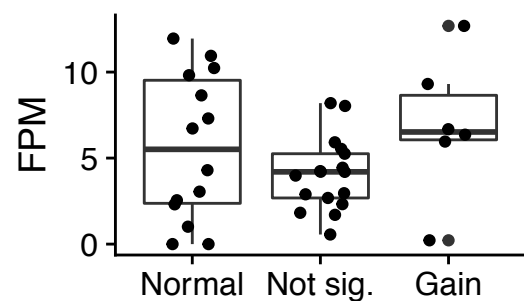
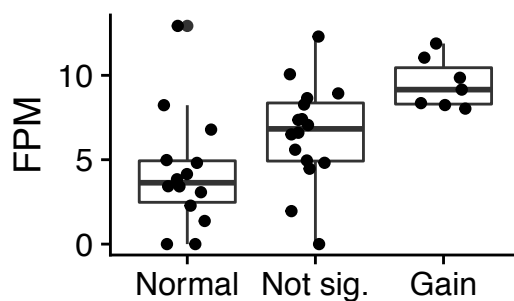
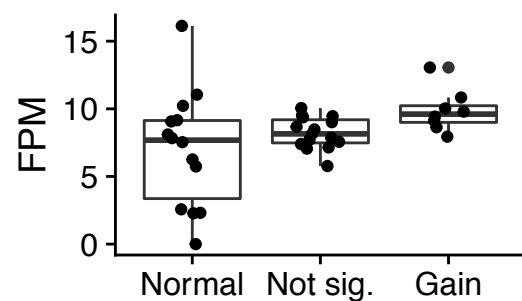
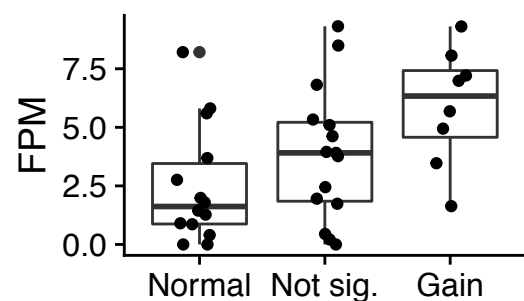
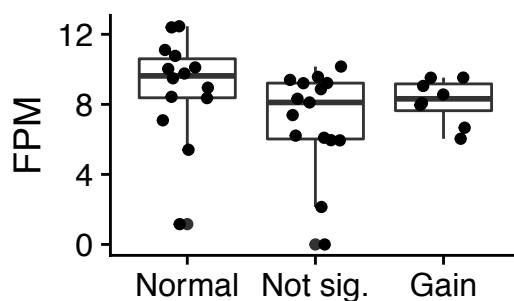
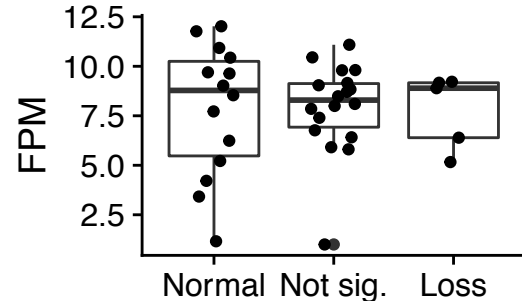
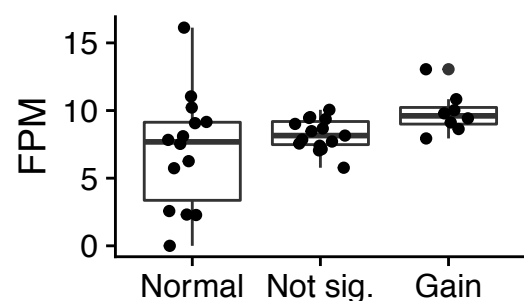
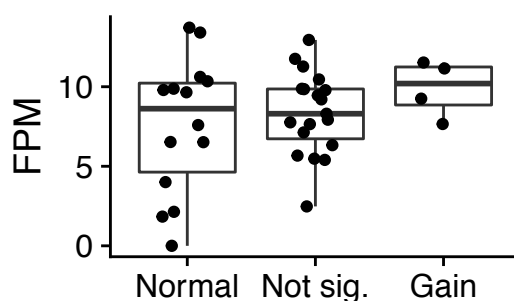
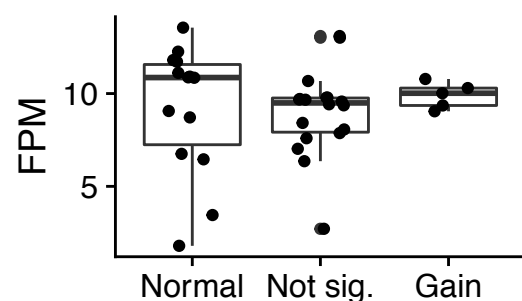
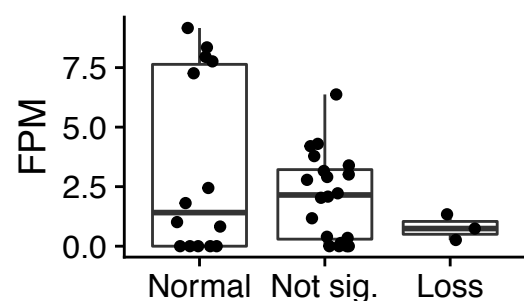
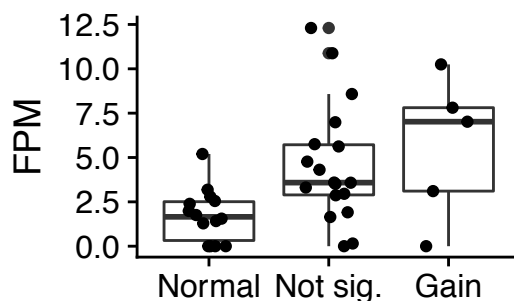
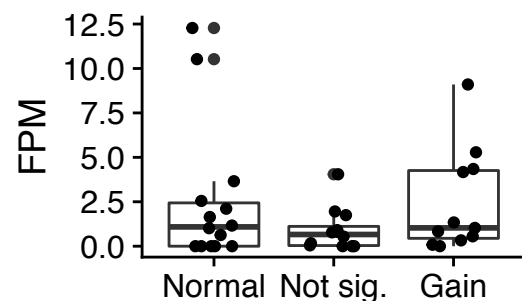
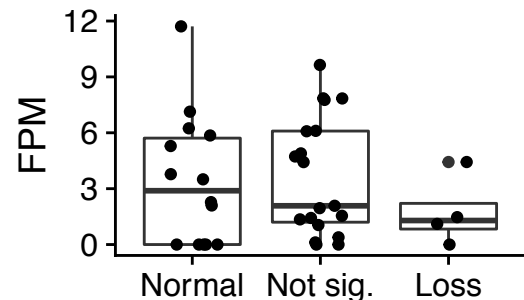
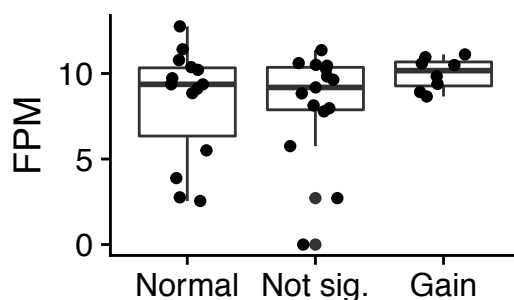
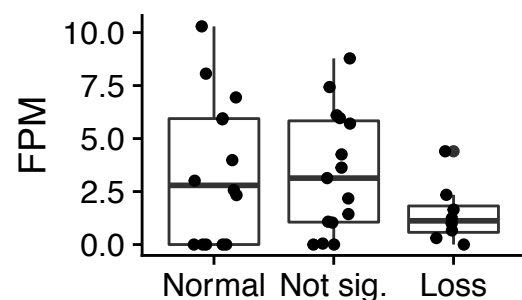


chr20:3222748–3223248ITPA (Promoter), $p = 8.2858\text{e-}06$ **chr19:53467428–53467928**ZNF813 (Promoter), $p = 8.5292\text{e-}06$ **chr6:106974520–106975020**CD24 (Promoter), $p = 9.061\text{e-}06$ **chr11:8721149–8721649**DENND2B (Promoter), $p = 9.4383\text{e-}06$ **chr1:22710558–22711058**EPHB2 (Promoter), $p = 1.0058\text{e-}05$ **chr7:2192969–2193469**MAD1L1 (Promoter), $p = 1.3985\text{e-}05$ **chr17:48626470–48626970**HOXB9 (Promoter), $p = 1.4016\text{e-}05$ **chr11:45922092–45922592**LARGE2 (Promoter), $p = 1.6965\text{e-}05$ **chr10:4825863–4826363**AKR1E2 (Promoter), $p = 1.8955\text{e-}05$ **chr13:112722848–112723348**ATP11A (Enhancer), $p = 1.9053\text{e-}05$ **chr1:61184036–61184536**NFIA (Enhancer), $p = 1.9975\text{e-}05$ **chr3:53182768–53183268**PRKCD (Promoter), $p = 2.4321\text{e-}05$ **chr21:36698879–36699379**SIM2 (Promoter), $p = 2.6006\text{e-}05$ **chr14:100369959–100370459**WARS1 (Promoter), $p = 3.2835\text{e-}05$ **chr20:62955556–62956056**SLC17A9 (Promoter), $p = 3.3959\text{e-}05$ 

chr20:63283974–63284474ARFGAP1 (Promoter), $p = 4.6761e-05$ **chr8:144396807–144397307**CPSF1 (Promoter), $p = 5.162e-05$ **chr20:45254383–45254883**SLPI (Promoter), $p = 5.2144e-05$ **chr13:49348723–49349223**CAB39L (Promoter), $p = 5.5036e-05$ **chr19:57651214–57651714**ZNF134 (Enhancer), $p = 5.5057e-05$ **chr3:42148965–42149465**TRAK1 (Promoter), $p = 5.7935e-05$ **chr19:7874479–7874979**PRR36 (Promoter), $p = 6.4443e-05$ **chr22:46537402–46537902**CELSR1 (Promoter), $p = 6.8247e-05$ **chr2:197255460–197255960**ANKRD44 (Enhancer), $p = 7.1641e-05$ **chr20:44355113–44355613**HNF4A (Promoter), $p = 7.4813e-05$ **chr4:110165359–110165859**ELOVL6 (Enhancer), $p = 0.00010296$ **chr21:44428266–44428766**TRPM2 (Promoter), $p = 0.00011132$ **chr22:32801390–32801890**TIMP3 (Promoter), $p = 0.0001137$ **chr4:47531649–47532149**ATP10D (Enhancer), $p = 0.00011899$ **chr20:47785323–47785823**SULF2 (Promoter), $p = 0.00012168$ 

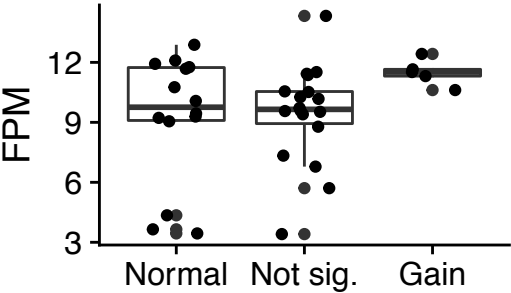
chr6:158290634–158291134TULP4 (Enhancer), $p = 0.00013923$ **chr22:42967892–42968392**PACIN2 (Enhancer), $p = 0.00014444$ **chr19:48752815–48753315**FUT1 (Promoter), $p = 0.00015663$ **chr7:74479299–74479799**GTF2IRD1 (Enhancer), $p = 0.00016088$ **chr2:88144817–88145317**FABP1 (Enhancer), $p = 0.00016266$ **chr8:143905959–143906459**EPPK1 (Enhancer), $p = 0.00017426$ **chr6:144055046–144055546**PLAGL1 (Enhancer), $p = 0.0001851$ **chr10:77163943–77164443**KCNMA1 (Enhancer), $p = 0.0001875$ **chr14:89186356–89186856**FOXN3 (Promoter), $p = 0.000257$ **chr7:143904717–143905217**TCAF1 (Promoter), $p = 0.00027665$ **chr7:101237662–101238162**CLDN15 (Promoter), $p = 0.00028352$ **chr3:50303427–50303927**HYAL1 (Promoter), $p = 0.00029216$ **chr17:82754838–82755338**TBCD (Promoter), $p = 0.00030745$ **chr14:77299711–77300211**POMT2 (Promoter), $p = 0.00032647$ **chr1:234602700–234603200**IRF2BP2 (Enhancer), $p = 0.00033421$ 

chr10:110212088–110212588MXI1 (Promoter), $p = 0.00034007$ **chr14:94388605–94389105**SERPINA1 (Promoter), $p = 0.00034401$ **chr7:50714939–50715439**GRB10 (Enhancer), $p = 0.0003522$ **chr8:27332945–27333445**PTK2B (Enhancer), $p = 0.00036806$ **chr20:51800069–51800569**SALL4 (Promoter), $p = 0.00038815$ **chr1:35869480–35869980**AGO1 (Promoter), $p = 0.00041012$ **chr9:134806254–134806754**COL5A1 (Promoter), $p = 0.00041556$ **chr8:143805893–143806393**SCRIB (Promoter), $p = 0.0004214$ **chr22:50282402–50282902**PLXNB2 (Promoter), $p = 0.00057056$ **chr19:962209–962709**ARID3A (Promoter), $p = 0.00074412$ **chr8:38805190–38805690**TACC1 (Promoter), $p = 0.00076409$ **chr7:2373206–2373706**EIF3B (Promoter), $p = 0.00077238$ **chr15:55952497–55952997**NEDD4 (Promoter), $p = 0.00078902$ **chr9:36151783–36152283**GLIPR2 (Enhancer), $p = 0.00080275$ **chr12:29220790–29221290**FAR2 (Promoter), $p = 0.00081381$ 

chr19:1045131–1045631ABCA7 (Promoter), $p = 0.00083321$ **chr11:66718627–66719127**SPTBN2 (Promoter), $p = 0.00083328$ **chr17:75700362–75700862**SAP30BP (Promoter), $p = 0.00083692$ **chr10:114239272–114239772**VWA2 (Promoter), $p = 0.00092077$ **chr1:54256772–54257272**SSBP3 (Promoter), $p = 0.00092462$ **chr14:35356023–35356523**FAM177A1 (Enhancer), $p = 0.0009548$ **chr17:75706968–75707468**SAP30BP (Promoter), $p = 0.0011004$ **chr5:151130725–151131225**ANXA6 (Promoter), $p = 0.0011438$ **chr12:32501826–32502326**FGD4 (Promoter), $p = 0.0012307$ **chr2:227706785–227707285**SLC19A3 (Promoter), $p = 0.0012563$ **chr7:5592520–5593020**FSCN1 (Promoter), $p = 0.0012776$ **chr7:44544016–44544516**NPC1L1 (Promoter), $p = 0.0013358$ **chr9:66900431–66900931**ZNF658 (Promoter), $p = 0.0013372$ **chr1:225418613–225419113**LBR (Promoter), $p = 0.0013461$ **chr19:21851889–21852389**ZNF43 (Promoter), $p = 0.0013678$ 

chr20:36154310–36154810

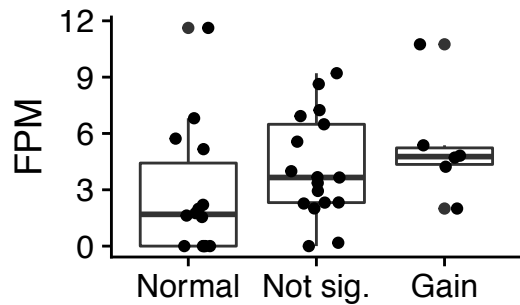
EPB41L1 (Promoter), p = 0.0013684



EMT genes

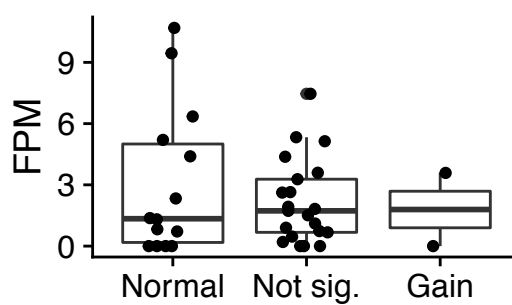
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MMP9 (Promoter), p = 0.01457



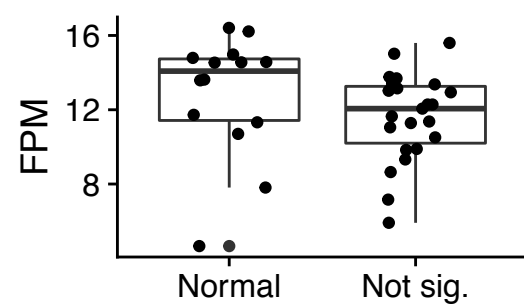
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SNAI2 (Promoter), p = 0.23724



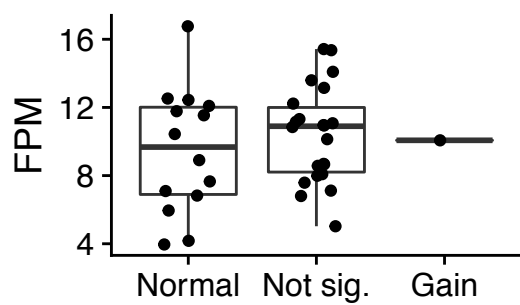
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VIM (Promoter), p = NA



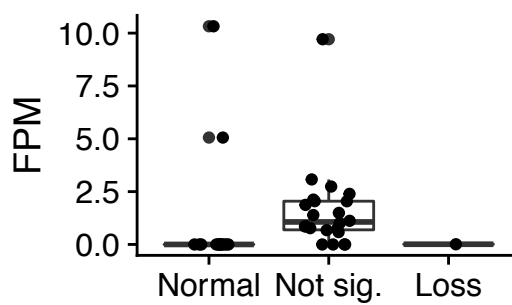
chr2:215435983–215436483

FN1 (Promoter), p = 0.13198



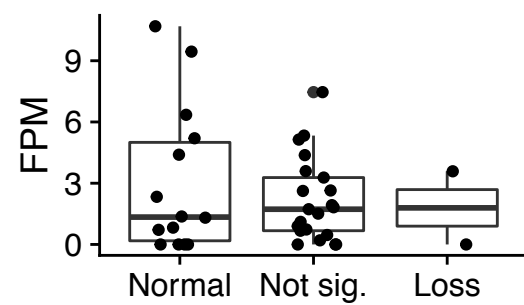
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SNAI1 (Enhancer), p = 0.004552



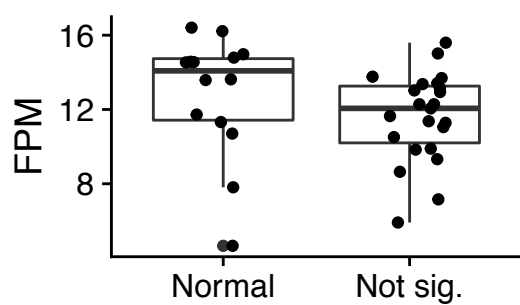
chr8:48921741–48922241

SNAI2 (Promoter), p = NA



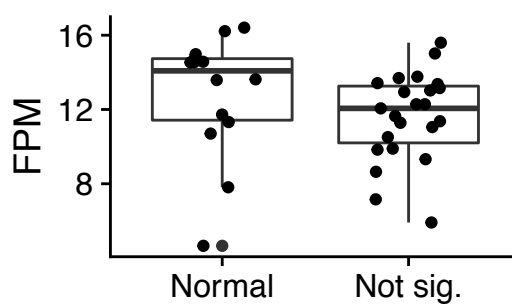
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VIM (Promoter), p = 0.70723



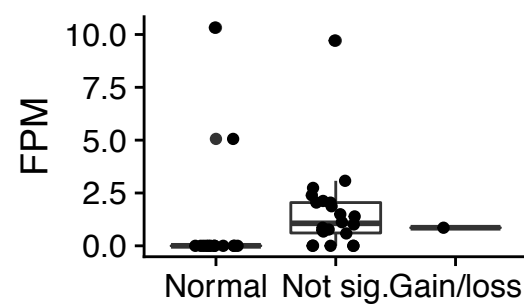
chr10:17229864–17230364

VIM (Promoter), p = 0.70419



chr20:49982618–49983118

SNAI1 (Promoter), p = 0.55784



chr16:55502744–55503244

MMP2 (Promoter), p = NA

