Supporting Information

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SI Materials and Methods

Generation of Suppression and Expression Vectors. Oligonucleotides used for the generation of the pSUPER constructs were as follows: kip1_sense, GAT CCC CGG TGC CGG CGC AGG AGA GCT TCA AGA GAG CTC TCC TGC GCC GGC ACC TTT TTG GAA A; kip1_antisense, AGC TTT TCC AAA AAG GTG CCG GCG CAG GAG AGC TCT CTT GAA GCT CTC CTG CGC CGG CAC CGG G; kip2_1_sense, GAT CCC CCA GGT CCC TGA GCA GGT CTT TCA AGA GAA GAC CTG CTC GGG ACC TGT TTT TGG AAA; kip2_1_antisense, AGC TTT TCC AAA AAC AGG TCC CTG AGC AGG TCT TCT CTT GAA AGA CCT GCT CAG GGA CCT GGG G; kip2_3_sense, GAT CCC CGG ACG AGG AGC CGG TGG AGT TCA AGA GAC TCC ACC GGC TCC TCG TCC TTT TTG GAA A; kip2_3_antisense, AGC TTT TCC AAA AAG GAC GAG GAG CCG GTG GAG TCT CTT GAA CTC CAC CGG CTC CTC GTC CGG G. The p57kip2 expression vector was cloned by ligating an EcoRI-EcoRI fragment of the rat p57kip2 cDNA into the pIRES2-EGFP vector (BD Biosciences). Coexpression of citrine and hygromycin B resistance genes was achieved by the integration of a NheI-NotI citrine cDNA fragment into the multiple cloning site of the pcDNA3-hygB expression vector (Invitrogen Life Technologies).

Cocultures of Dissociated Dorsal Root Ganglia (DRGs). DRGs were collected and treated with trypsin and collagenase for 45 min in DMEM. The cells were dissociated mechanically, and trypsin reaction was stopped by addition of medium containing 10% FCS. After centrifugation, cells were resuspended in DRG medium [DMEM-Glutamax, penicillin/streptomycin (both Invitrogen Life Technologies), 10% FCS, and 100 ng/ml NGF (Sigma–Aldrich)] and plated on collagen (BD Biosciences)-coated dishes. After 2 days medium was replaced by myelination-promoting medium (DRG medium plus 50 μg/ml ascorbic acid) and exchanged every 2 days. For transplantation experiments, transfected Schwann cells were selected with hygromycin B containing medium for 48 h, then gently trypsinised and seeded on dissociated DRG cocultures at a density of 100,000 cells per square centimeter.

Gene Expression Analysis. Expression of rat p57kip2 was detected by means of TaqMan (Rn00711097_m1; Applied Biosystems) as well as SybrGreen assays. Sequences of oligonucleotides were as follows: p57kip2_fwd, CAG GAC GAG AAT CAG GAG CTG A; p57kip2_rev, TTG GCG AAG AAG TCG TTC G; p27kip1_fwd, TGG ACC AAA TGC CTG ACT CGT; p27kip1_rev, GGC CCT TTT GTT TTG CGA A; P0_fwd, CCC CAG TAG AAC CAG CCT CA; P0_rev, TCC AGG CCC ATC ATG TTC TT; PMP22_fwd, GCG GAA CAC TTG ACC CTG AA; PMP22_rev, TCA TTT AAA CAT GTG GCC CCA; MBP_fwd, CAA TGG ACC CGA CAG GAA AC; MBP_rev, TGG CAT CTC CAG CGT GTT C; MAL_fwd, AGG AGG CCT TTG GTT ATC CC; MAL_rev, GCA AAT GGC AGA TTT GGG TAC; Oct-6_fwd, GGC ACC CTC TAC GGT AAT GTG T; Oct-6_rev, TTG AGC AGC GGT TTG AGC T; CXCR4_fwd, CGT CGT GCA CAA GTG GAT CT; CXCR4_rev, CAG TGG AAG AAG GCG AGG G; Krox24_fwd, CCC TGT TGA GTC CTG CGA TC; Krox24_rev, GGC GTG TAA GCT CAT CCG AG; Krox20_fwd, TTT TTC CAT CTC CGT GCC A; Krox20_rev, GAA CGG CTT TCG ATC AGG G; Itgb4_fwd, CTC CAG CAG ACG AAG TTC CG; Itgb4_rev, GTC TTG CTT TTT CCC AGC GT; Lgi4_fwd, TGG CCA AGT CAC TGT AGC AGG; Lgi4_rev, TTG AAG CAC GCT GCG AAT AA; Sox10_fwd, GCA GGC TGG ACA CTA AAC CC; Sox10_rev, GTG CGA GGC AAA GGT AGA CTG; Nab1_fwd, GGC CAA AAT GAT TGG TCA CAT; Nab1_rev, TTG TGT GGA TCC TCG TCG C; p75-LNGR_fwd, TAT CTG GAA GCC ATG TCT GCC; p75-LNGFR_rev, ATA GAC CAA TGG ACC AGC CCT; GAPDH_fwd, GAA CGG GAA GCT CAC TGG C; GAPDH_rev, GCA TGT CAG ATC CAC AAC GG; ODC_fwd, GGT TCC AGA GGC CAA ACA TC; ODC_rev, GTT GCC ACA TTG ACC GTG AC.

Table S1. Absence of IFN response-related gene expression

GenBank accession no.	Gene	Expression	Regulation
NM_001014786	IFN, α1 precursor	Present	—
NM_019127	IFN, β1	Present	—
NM_138880	IFN, γ	Present	—
NM_053390	IL-12a	Present	—
NM_022611	IL-12b	Present	—
NM_138913	2′,5′-oligoadenylate synthetase 1	Present	—
NM_144752	2′,5′-oligoadenylate synthetase 2	Present	—
XM_342872	Jak1	Present	—
NM_031514	Jak2	Present	—
NM_012855	Jak3	Present	—
XM_233741	Similar to tyrosine kinase TYK2	Present	—
NM_032612	Stat1	Present	—
NM_001011905	Stat2	Absent	—
NM_012747	Stat3	Present	—
NM_001012226	Stat4	Absent	—
NM_017064	Stat5a	Present	—
NM_022380	Stat5b	Present	—
NM_012591	IFN regulatory factor 1	Present	—
NM_001106314	IFN-induced transmembrane protein	Absent	—
NM_012554	Enolase 1	Present	—
NM_139325	Enolase 2γ	Present	Up
NM_012724	High-affinity Fc fragment of IgE receptor	Absent	—
NM_001024753	IFIT2	Absent	—
NM_053535	Ectonucleotide pyrophosphatase/phosphodiesterase 1	Present	—
NM_057104	Ectonucleotide pyrophosphatase/phosphodiesterase 2	Present	Up
NM_019370	Ectonucleotide pyrophosphatase/phosphodiesterase 3	Present	—
NM_001012744	Ectonucleotide pyrophosphatase/phosphodiesterase 5	Present	—
XM_224853	Ectonucleotide pyrophosphatase/phosphodiesterase 6	Present	—
XM_573552	Secreted phosphoprotein-1	Present	—
NM_053769	Dual specificity phosphatase 1	Present	—
NM_001012089	Dual specificity phosphatase 2	Present	—
NM_022199	Dual specificity phosphatase 4	Present	—
NM_133578	Dual specificity phosphatase 5	Present	Up
NM_053883	Dual specificity phosphatase 6	Present	Down
NM_001037973	Dual specificity phosphatase 9	Absent	—
NM_001025650	Dual specificity phosphatase 11	Present	—
NM_022248	Dual specificity phosphatase 12	Present	—
NM_001007006	Dual specificity phosphatase 13	Present	—
XM_575070	Dual specificity phosphatase 14	Present	Down
NM_001108598	Dual specificity phosphatase 15	Absent	—
NM_001013128	Dual specificity phosphatase 18	Present	—
XM_230039	Dual specificity phosphatase 19	Present	—
XM_341523	Dual specificity phosphatase 22	Present	—
XM_215117	IFN-induced transmembrane protein 1	Present	—
NM_030833	IFN-induced transmembrane protein 2	Present	—
XM_341957	IFN-induced transmembrane protein 3	Present	Down
NM_001024755	Ubiquitin-conjugating enzyme E2L 6	Present	Down
NM_172222	Complement component 2	Present	—
NM_001013170	Tryptophanyl-tRNA synthetase	Present	—
NM_198741	MHC, class II, DMα	Present	Down
NM_198740	MHC, class II, DMβ	Present	—
NM_001013925	NY-REN-18 antigen	Absent	—
XM_342487	Similar to NY-REN-41 antigen	Present	Up
XM_579659	Best5 protein	Present	Up
NM_019335	IFN-inducible double-stranded RNA-dependent protein kinase	Present	Down

IFN response-related genes were screened by means of GeneChip analysis for expression (absent or present) and whether regulation was observed in p57kip2-suppressed Schwann cells as compared with control-transfected cells. Up and Down indicate where a gene was identified to be significantly up- or down-regulated, and — indicates genes that were not regulated.