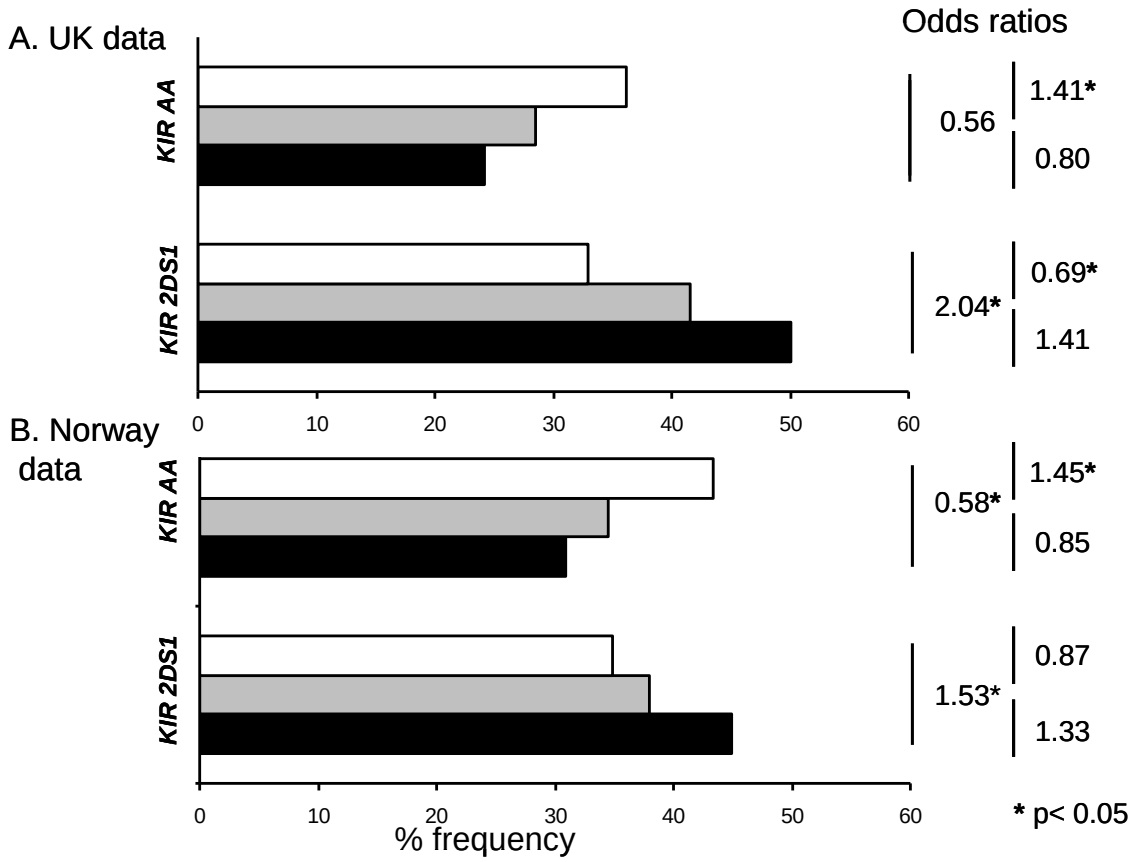
Supplementary Data

Figure S1. *KIR AA* decreases in frequency and *KIR2DS1* increases in frequency across the birth weight groups from low to high birth weight in both UK and Norwegian populations.



Low birth weight ≤5th centile + pre-eclampsia
UK n=860, Norway n=224

Median birth weight 6th to 89th centile
UK n=338, Norway n=656

High birth weight ≥90th centile
UK n= 66, Norway n=256

Table S1. *KIR* carrier frequencies in the Norwegian MoBa cohort.

Maternal *KIR*	**LBW+PE**	**Median**	**HBW**
No	224(83+141)	656	256
A* haplotype *KIR:			
2DL1	96.9(217)	97.3(638)	97.7(250)
2DP1	97.3(218)	97.6(640)	98.0(251)
2DL3	92.0(206)	90.5(594)	91.8(235)
3DL1	96.4(216)	95.9(629)	95.3(244)
2DS4	96.4(216)	95.7(628)	95.3(244)
Del	51.8(116)	54.4(357)	54.7(140)
Del/Wt	28.6(64)	24.5(161)	21.9(56)
Wt	16.1(36)	16.9(111)	18.8(48)
B* haplotype *KIR:			
2DS2	42.0(94)	47.0(308)	46.9(120)
2DL2	42.0(94)	47.0(308)	46.5(119)
2DS3	22.8(51)	26.8(176)	26.2 (67)
2DL5	40.6(91)	48.5(318)	51.2(131)*
3DS1	34.4(77)	38.6(253)	44.5(114)*
2DS5	26.8(60)	30.0(197)	36.3(93)*
2DS1	34.8(78)	38.0(249)	44.9(115)*
KIR AA	43.3(97)	34.5(226)	30.9(79)*
Maternal *HLA-C2* Carriers	59.6(134/225)	53.4(350)	59.0(151)
Fetal *HLA-C2* carriers	55.0(122/222)	54.8 (358/653)	61.7(156/253)

LBW = low birth weight ≤5th centile; PE = pre-eclampsia; median = 6th to 89th centile, HBW = high birth weight ≥90th centile.

* Frequency of *B* haplotype *KIR* in the high birth weight group were significantly greater than in low birth weight plus pre-eclampsia group.

Table S2. Effect of *KIR2DS5* and *KIR AA* on birth weight *

KIR **tested**	**Subjects**	**Covariates**	**Effect on birth weight (g)**			
			n	mean	SE	p
2DS5	UK and Norway	Cohort and fetal sex	1316	81	35	0.02
KIRAA	UK and Norway	Cohort and fetal sex	1316	-56	35	0.11

***** Presence versus absence of maternal *KIR2DS5* and *KIR AA* were tested for an effect on birth weight as a continuous variable in grams, in linear regression analyses of pregnancies >5th birth weight centile. Cohort and sex of the baby were included as covariates in every analysis. n = number of pregnancies analysed, mean = the average increase in birth weight (in grams) conferred by presence of the test variable and SE = standard error.