Upload image

May 28, 2020

Association between the rs1544410 polymorphism in the vitamin D receptor (VDR) gene and insulin secretion after gestational diabetes mellitus

PLOS One

Nael Shaat[1], Anastasia Katsarou[1], Bushra Shahida[2], Rashmi B Prasad[2], Karl Kristensen[3], Tereza Planck[1]

[1]Genomics, Diabetes and Endocrinology, Department of Clinical Sciences, Malmö, Lund University, Malmö, Sweden and Department of Endocrinology, Skåne University Hospital, Malmö, Sweden,

[2]Genomics, Diabetes and Endocrinology, Department of Clinical Sciences, Malmö, Lund University, Malmö, Sweden,

[3]Genomics, Diabetes and Endocrinology, Department of Clinical Sciences, Malmö, Lund University, Malmö, Sweden and Department of Obstetrics and Gynaecology, Skåne University Hospital, Malmö, Sweden

1 Works for me dx.doi.org/10.17504/protocols.io.bcjbiuin

Nael Shaat

ABSTRACT

Genotyping using TaqMan allelic discrimination assay

Genotyping was done by adding 2 µl (total 10 ng) into MicroAmp™ Optical 384-well plate (Applied Biosystems, Sweden) and dried overnight. On the following day, a mixture of 2.5 µl of TaqMan® Genotyping Master Mix (Applied Biosciences, Sweden), 0.0625 µl of TaqMan® SNP Genotyping Assay (Applied Biosystems, Sweden) and 2.4 µl of sterile H_2O was added to the wells using a multichannel pipette. The plates were covered with MicroAmp™ optical Adhesive Film (Applied Biosystems, Sweden), vortexed and spun down shortly. Plates were then placed in a thermal cycler (Applied Biosystems, Sweden) with following PCR conditions: 50°C for 2 min, 95°C for 10 min and 40 cycles of (95°C for 15 sec and 60°C for 1 min). The plates were read using QuantStudio™ 7 Flex Real-Time PCR System (Applied Biosystems, Sweden).TaqMan® SNP Genotyping Assay were designed using Custom Assay TaqMan® Design Tool (Applied Biosystems, Sweden). More details about the studied TaqMan® SNP are listed in the Table below.

SNP	ID ThermoFischer	Gene	Position
rs731236	C_2404008_10	VDR	Chr.12: 47844974 on GRCh38
rs7975232	C_28977635_10	VDR	Chr.12: 47845054 on GRCh38
rs10735810/rs2228570	C_12060045_20	VDR	Chr.12: 47879112 on GRCh38
rs1544410	AHQJVHI	VDR	Chr.12: 47846052 on GRCh38
rs7041	C__3133594_30	DBP	Chr.4: 71752617 on GRCh38
rs4588	C__8278879_10	DBP	Chr.4: 71752606 on GRCh38
rs10877012	AHRSTNQ	CYP27B1	Chr.12: 57768302 on GRCh38
rs4646536	C_25623453_10	CYP27B1	Chr.12: 57764205 on GRCh38

EXTERNAL LINK

Citation: Nael Shaat, Anastasia Katsarou, Bushra Shahida, Rashmi B Prasad, Karl Kristensen, Tereza Planck (05/28/2020). Association between the rs1544410 polymorphism in the vitamin D receptor (VDR) gene and insulin secretion after gestational diabetes mellitus. https://dx.doi.org/10.17504/protocols.io.bcjbiuin

EXTERNAL LINK

https://doi.org/10.1371/journal.pone.0232297

THIS PROTOCOL ACCOMPANIES THE FOLLOWING PUBLICATION

Shaat N, Katsarou A, Shahida B, Prasad RB, Kristensen K, Planck T (2020) Association between the rs1544410 polymorphism in the vitamin D receptor (VDR) gene and insulin secretion after gestational diabetes mellitus. PLoS ONE 15(5): e0232297. doi: 10.1371/journal.pone.0232297

Citation: Nael Shaat, Anastasia Katsarou, Bushra Shahida, Rashmi B Prasad, Karl Kristensen, Tereza Planck (05/28/2020). Association between the rs1544410 polymorphism in the vitamin D receptor (VDR) gene and insulin secretion after gestational diabetes mellitus. https://dx.doi.org/10.17504/protocols.io.bcjbiuin