

## Supplementary Methods

The primer sequences used for quantitative PCR.

PD-L1-F, 5'-TGG CAT TTG CTG AAC GCA TTT-3';

PD-L1-R, 5'-TGC AGC CAG GTC TAA TTG TTT T-3';

$\beta$ -actin-F, 5'-CAA TGA GCT GCG TGT GGC T-3'; and

$\beta$ -actin-R, 5'-TAG CAC AGC CTG GAT AGC AA-3'.