

Table S4

Sequences of oligonucleotide primers.

Gene name	Primer sequence (5'-3')	Accession number	Reference
$\beta$ -actin	F: AGC AAG CAG GAG TAC GAT GAG R: ATC CAA CCG ACT GCT GTC A	NM_173979	[1]
YWHAZ	F: GCA TCC CAC AGA CTA TTT CC R: GCA AAG ACA ATG ACA GAC CA	GU817014	[2]
GAPDH	F: GGC GTG AAC CAC GAG AAG TAT AA R: CCC TCC ACG ATG CCA AAG T	NM_001034034	[1]
CFD	F : CAC TGA GCG AAT GAT GTG CG R: TAC CGG GCT TCT TGT GGT TG	NM_001034255	
FCN1	F: TGG AGA GAA AGG AGA GTC GGG R: GGA AAA CGG TCC ACC CCC	NM_001010996	
TNFSF13	F: ATC TAG CGG CGG TTT GAG AC R: TGA GGA TGG GGC TTC TTG TG	NM_001034647	
PD-1	F: AAT GAC AGC GGC GTC TAC TT R: GAT GAC CAG GCT CTG CAT CT	AB510901	[3]
LAG-3	F: CTG TTC AGG AGT CCC CAC AT R: GAC AAG ACT GGA TCC CCA CA	AB608099	[4]
Tim-3	F: GGA TCC AAT TCC CCA CA R: AGG GTC TTC AGT GTC CGT GT	AB689695	[5]
CTLA-4	F: CCA GAG TCA TGG GAC TTG GT R: TCA CAT GAG AAG CTG GCA AC	AB910937	[6]
PD-L1	F: GGG GGT TTA CTG TTG CTT GA R: GCC ACT CAG TTG GTG AT	NM_001163412.1	[7]

F, forward; R, reverse; bps, base pairs

## References

1. Robinson TL, Sutherland IA, Sutherland J. 2007. Validation of candidate bovine reference genes for use with real-time PCR. *Vet Immunol Immunopathol* 115:160–5.
2. Spalenza V, Girolami F, Bevilacqua C, Riondato F, Rasero R, Nebbia C, Sacchi P, Martin P. 2011. Identification of internal control genes for quantitative expression analysis by real-time PCR in bovine peripheral lymphocytes. *Vet J* 189:278–83.
3. Ikebuchi R, Konnai S, Sunden Y, Onuma M, Ohashi K. 2010. Molecular cloning and expression analysis of bovine programmed death-1. *Microbiol Immunol* 54:291-8.
4. Shirai T, Konnai S, Ikebuchi R, Okagawa T, Suzuki S, Sunden Y, Onuma M, Murata S, Ohashi K. 2011. Molecular cloning of bovine lymphocyte activation gene-3 and its expression characteristics in bovine leukemia virus-infected cattle. *Vet Immunol Immunopathol* 144:462-7.
5. Okagawa T, Konnai S, Ikebuchi R, Suzuki S, Shirai T, Sunden Y, Onuma M, Murata S, Ohashi K. 2012. Increased bovine Tim-3 and its ligand expressions during bovine leukemia virus infection. *Vet Res* 43:45.
6. Suzuki S, Konnai S, Okagawa T, Ikebuchi R, Nishimori A, Kohara J, Mingala CN, Murata S, Ohashi K. 2015. Increased expression of the regulatory T cell-associated marker CTLA-4 in bovine leukemia virus infection. *Vet Immunol Immunopathol* 163:115-24.
7. Ikebuchi R, Konnai S, Shirai T, Sunden Y, Murata S, Onuma M, Ohashi K. 2011. Increase of cells expressing PD-L1 in bovine leukemia virus infection and enhancement of anti-viral immune responses in vitro via PD-L1 blockade. *Vet Res* 42:103.