



**Supplemental Data 1. A scheme of the protocol for experimental trials.**

From the first day to the 4<sup>th</sup> week, all chicks received an ad libitum diet (free access to food). At 4<sup>th</sup> week, two groups of hens were separated in function of 2 types of diets: control diet and the same diet supplemented with GSE at 1% of total diet. At week 38 of age, a third group was created from the control group and received the diet supplemented with 2% GSE for two weeks.

Gene	Sens	Reverse
ACTB	ACGGAACCACAGTTATCATC	GTCCCAGTCTTCAACTATAACC
EEF1A1	AGCAGACTTGTGACCTGCC	TCACATGAGACAGACGGTTGC
GAPDH	ACGGATTGGTCGTATTGGG	TGATTTGGAGGGATCTGC
IL22	TGTTGTTGCTGTTCCCTCTTC	CACCCCTGTCCCTTTGGA
mucin 2 (MUC-2)	GCTGATTGTCACTCACGCCCT	ATCTGCCTGAATCACAGGTGC
NOS2 (iNOS)	CCACCAGGAGATGTTGAACATATG TC	CCAGATGTGTGTTTCCATGCA
IL1B	AGGCTAACATTGCGCTGTA	CTTGTAGCCCTTGATGCCA
TGFB1	CGCTCAGAACGACGTCAA	GTCGTCCACACCAACGAG
IgA	GTCACCGTCACCTGGACTACA	ACCGATGGTCTCCTCACATC

**Supplemental Data 2. Oligonucleotide primer sequences.**