



E) Canine retinal mRNA sequence differed from CanFam2.0 reference sequence in exon 1, and two variants were identified: the first was a SNP that changes an alanine residue to an aspartic acid residue; the second was a 6 bp insertion resulting in the in-frame insertion of two alanine residues. To assess the prevalence of these variants, genomic DNA from 43 TS and 76 dogs comprising 31 breeds was sequenced. The SNP variant was present in the homozygous and heterozygous state in both cohorts (i.e. TS and multiple other breeds). Eight dogs from five additional breeds (Australian Shepherd, Brittany Spaniel, Shetland Sheepdog, Tibetan Terrier and Welsh Springer Spaniel) were heterozygous for the insertion variant and none were homozygous. It is unclear what effect, if any, these variants have on the protein.