

## GEPHE SUMMARY

Tva ( <a href="https://www.gephebase.org/search-criteria?/and+Gene">https://www.gephebase.org/search-criteria?/and+Gene</a> Gephebase=^Tva^#gephebase-summary-title)	Gephebase Gene	GP00002258	GephelD
	Entry Status	Martin	Main curator
Published			

## PHENOTYPIC CHANGE

	Trait Category
Physiology ( <a href="https://www.gephebase.org/search-criteria?/and+Trait">https://www.gephebase.org/search-criteria?/and+Trait</a> Category=^Physiology^#gephebase-summary-title)	Trait
Pathogen resistance (virus) ( <a href="https://www.gephebase.org/search-criteria?/and+Trait=^Pathogen+resistance+(virus)^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Trait=^Pathogen+resistance+(virus)^#gephebase-summary-title</a> )	Trait State in Taxon A
Sensitive	Trait State in Taxon B
Resistance to avian sarcoma and leukosis viruses subgroup A	Ancestral State
Taxon A	Taxonomic Status
Intraspecific ( <a href="https://www.gephebase.org/search-criteria?/and+Taxonomic">https://www.gephebase.org/search-criteria?/and+Taxonomic</a> Status=^Intraspecific^#gephebase-summary-title)	

Taxon A	Latin Name	Taxon B	Latin Name
Gallus gallus ( <a href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Gallus+gallus^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Gallus+gallus^#gephebase-summary-title</a> )		Gallus gallus ( <a href="https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Gallus+gallus^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=^Gallus+gallus^#gephebase-summary-title</a> )	
chicken	Common Name	chicken	Common Name
Gallus gallus domesticus; chicken; bantam; chickens	Synonyms	Gallus gallus domesticus; chicken; bantam; chickens	Synonyms
species	Rank	species	Rank
	Lineage		Lineage
cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Sarcopterygii; Dipnotetrapodomorpha; Tetrapoda; Amniota; Sauropsida; Sauria; Archelosauria; Archosauria; Dinosauria; Saurischia; Theropoda; Coelurosauria; Aves; Neognathae; Galloanserae; Galliformes; Phasianidae; Phasianinae; Gallus		cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Sarcopterygii; Dipnotetrapodomorpha; Tetrapoda; Amniota; Sauropsida; Sauria; Archelosauria; Archosauria; Dinosauria; Saurischia; Theropoda; Coelurosauria; Aves; Neognathae; Galloanserae; Galliformes; Phasianidae; Phasianinae; Gallus	
Gallus () - (Rank: genus) ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9030">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9030</a> )	Parent	Gallus () - (Rank: genus) ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9030">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9030</a> )	Parent
9031 ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9031">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9031</a> )	NCBI Taxonomy ID	9031 ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9031">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9031</a> )	NCBI Taxonomy ID
No	is Taxon A an Infraspecies?	No	is Taxon B an Infraspecies?

## GENOTYPIC CHANGE

tva	Generic Gene Name	UniProtKB Gallus gallus
-	Synonyms	GenebankID or UniProtKB
-	0	
-	String	
-	Sequence Similarities	
-	GO - Molecular Function	
-	GO - Biological Process	
-	GO - Cellular Component	
GO:0016021 : integral component of membrane ( <a href="https://www.ebi.ac.uk/QuickGO/term/GO:0016021">https://www.ebi.ac.uk/QuickGO/term/GO:0016021</a> )		Presumptive Null
Yes ( <a href="https://www.gephebase.org/search-criteria?/and+Presumptive+Null=^Yes^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Presumptive+Null=^Yes^#gephebase-summary-title</a> )		

Coding ( <a href="https://www.gephebase.org/search-criteria?/and+Molecular%20Type=%5BCoding%5D#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Molecular Type=%5BCoding%5D#gephebase-summary-title</a> )	Molecular Type
Deletion ( <a href="https://www.gephebase.org/search-criteria?/and+Aberration%20Type=%5BDeletion%5D#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Aberration Type=%5BDeletion%5D#gephebase-summary-title</a> )	Aberration Type
1-9 bp	Deletion Size
c.502_511delCGCTCACCC	Molecular Details of the Mutation
Candidate Gene ( <a href="https://www.gephebase.org/search-criteria?/and+Experimental%20Evidence=%5BCandidate%20Gene%5D#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Experimental Evidence=%5BCandidate Gene%5D#gephebase-summary-title</a> )	Experimental Evidence
Intronic deletions of tva receptor gene decrease the susceptibility to infection by avian sarcoma and leukosis virus subgroup A. (2015) ( <a href="https://pubmed.ncbi.nlm.nih.gov/25873518">https://pubmed.ncbi.nlm.nih.gov/25873518</a> )	Main Reference
Chen W; Liu Y; Li H; Chang S; Shu D; Zhang H; Chen F; Xie Q	Authors
The group of avian sarcoma and leukosis virus (ASLV) in chickens contains six highly related subgroups, A to E and J. Four genetic loci, tva, tvb, tvc and tvj, encode for corresponding receptors that determine the susceptibility to the ASLV subgroups. The prevalence of ASLV in hosts may have imposed strong selection pressure toward resistance to ASLV infection, and the resistant alleles in all four receptor genes have been identified. In this study, two new alleles of the tva receptor gene, tva(r5) and tva(r6), with similar intronic deletions were identified in Chinese commercial broilers. These natural mutations delete the deduced branch point signal within the first intron, disrupting mRNA splicing of the tva receptor gene and leading to the retention of intron 1 and introduction of premature TGA stop codons in both the longer and shorter tva isoforms. As a result, decreased susceptibility to subgroup A ASLV in vitro and in vivo was observed in the subsequent analysis. In addition, we identified two groups of heterozygous allele pairs which exhibited quantitative differences in host susceptibility to ASLV-A. This study demonstrated that defective splicing of the tva receptor gene can confer genetic resistance to ASLV subgroup A in the host.	Abstract
	Additional References

## RELATED GEPHE

2 (BTN1A1, MX1) ( <a href="https://www.gephebase.org/search-criteria?/or+Taxon%20ID=%5E9031%5D/and+Trait=Pathogen%20resistance/and+groupHaplotypes=true#gephebase-summary-title">https://www.gephebase.org/search-criteria?/or+Taxon ID=%5E9031%5D/and+Trait=Pathogen resistance/and+groupHaplotypes=true#gephebase-summary-title</a> )	Related Genes
5 ( <a href="https://www.gephebase.org/search-criteria?/or+Gene%20Gephebase=%5BTva%5D/and+Taxon%20ID=%5E9031%5D/or+Gene%20Gephebase=%5BTva%5D/and+Taxon%20ID=%5E9031%5D#gephebase-summary-title">https://www.gephebase.org/search-criteria?/or+Gene Gephebase=%5BTva%5D/and+Taxon ID=%5E9031%5D/or+Gene Gephebase=%5BTva%5D/and+Taxon ID=%5E9031%5D#gephebase-summary-title</a> )	Related Haplotypes

## EXTERNAL LINKS

## COMMENTS

@AllelicSeries <https://omia.org/OMIA001299/9031/>