

## GEPHE SUMMARY

PRDM9 ( <a href="https://www.gephebase.org/search-criteria/?and+Gene+Gephebase=%PRDM9%#gephebase-summary-title">https://www.gephebase.org/search-criteria/?and+Gene+Gephebase=%PRDM9%#gephebase-summary-title</a> )	Gephebase Gene	GP00001640	GephelD
	Entry Status	Prigent	Main curator
Published			

## PHENOTYPIC CHANGE

	Trait Category		
Physiology ( <a href="https://www.gephebase.org/search-criteria/?and+Trait+Category=%Physiology%#gephebase-summary-title">https://www.gephebase.org/search-criteria/?and+Trait+Category=%Physiology%#gephebase-summary-title</a> )	Trait		
Recombination rate (male) ( <a href="https://www.gephebase.org/search-criteria/?and+Trait=%Recombination+rate+(male)%#gephebase-summary-title">https://www.gephebase.org/search-criteria/?and+Trait=%Recombination+rate+(male)%#gephebase-summary-title</a> )	Trait State in Taxon A		
Sperm Crossing-over Rate 1	Trait State in Taxon B		
Sperm Crossing-over Rate 2	Ancestral State		
Unknown	Taxonomic Status		
Domesticated ( <a href="https://www.gephebase.org/search-criteria/?and+Taxonomic+Status=%Domesticated%#gephebase-summary-title">https://www.gephebase.org/search-criteria/?and+Taxonomic+Status=%Domesticated%#gephebase-summary-title</a> )			
Taxon A		Taxon B	
Bos taurus	Latin Name	Bos taurus	Latin Name
( <a href="https://www.gephebase.org/search-criteria/?and+Taxon+and+Synonyms=%Bos+taurus%#gephebase-summary-title">https://www.gephebase.org/search-criteria/?and+Taxon+and+Synonyms=%Bos+taurus%#gephebase-summary-title</a> )		( <a href="https://www.gephebase.org/search-criteria/?and+Taxon+and+Synonyms=%Bos+taurus%#gephebase-summary-title">https://www.gephebase.org/search-criteria/?and+Taxon+and+Synonyms=%Bos+taurus%#gephebase-summary-title</a> )	
cattle	Common Name	cattle	Common Name
Bos bovis; Bos primigenius taurus; cattle; bovine; cow; dairy cow; domestic cattle; domestic cow; Bos taurus Linnaeus, 1758; Bos Taurus	Synonyms	Bos bovis; Bos primigenius taurus; cattle; bovine; cow; dairy cow; domestic cattle; domestic cow; Bos taurus Linnaeus, 1758; Bos Taurus	Synonyms
species	Rank	species	Rank
cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Sarcopterygii; Dipnotetrapodomorpha; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Boreoeutheria; Laurasiatheria; Artiodactyla; Ruminantia; Pecora; Bovidae; Bovinae; Bos	Lineage	cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Deuterostomia; Chordata; Craniata; Vertebrata; Gnathostomata; Teleostomi; Euteleostomi; Sarcopterygii; Dipnotetrapodomorpha; Tetrapoda; Amniota; Mammalia; Theria; Eutheria; Boreoeutheria; Laurasiatheria; Artiodactyla; Ruminantia; Pecora; Bovidae; Bovinae; Bos	Lineage
Bos (oxen, cattle) - (Rank: genus)	Parent	Bos (oxen, cattle) - (Rank: genus)	Parent
( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9903">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9903</a> )	NCBI Taxonomy ID	( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9903">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9903</a> )	NCBI Taxonomy ID
9913		9913	
( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9913">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9913</a> )		( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9913">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 9913</a> )	
Yes	is Taxon A an Infraspecies?	Yes	is Taxon B an Infraspecies?
Bulls from the Netherlands and New-Zealand	Taxon A Description	Bulls from the Netherlands and New-Zealand	Taxon B Description

## GENOTYPIC CHANGE

PRDM9	Generic Gene Name	UniProtKB Bos taurus
ZNF596	Synonyms	GenebankID or UniProtKB
-	String	0
-	Sequence Similarities	
-	GO - Molecular Function	
GO:0046872 : metal ion binding ( <a href="https://www.ebi.ac.uk/QuickGO/term/GO:0046872">https://www.ebi.ac.uk/QuickGO/term/GO:0046872</a> )		
GO:0003676 : nucleic acid binding ( <a href="https://www.ebi.ac.uk/QuickGO/term/GO:0003676">https://www.ebi.ac.uk/QuickGO/term/GO:0003676</a> )		
GO:0006355 : regulation of transcription, DNA-templated ( <a href="https://www.ebi.ac.uk/QuickGO/term/GO:0006355">https://www.ebi.ac.uk/QuickGO/term/GO:0006355</a> )	GO - Biological Process	
	GO - Cellular Component	

No ( <a href="https://www.gephebase.org/search-criteria?/and+Presumptive Null=^No">#gephebase-summary-title)</a>	Presumptive Null
Coding ( <a href="https://www.gephebase.org/search-criteria?/and+Molecular Type=^Coding">#gephebase-summary-title)</a>	Molecular Type
Deletion ( <a href="https://www.gephebase.org/search-criteria?/and+Aberration Type=^Deletion">#gephebase-summary-title)</a>	Aberration Type
1-9 bp	Deletion Size
variation in the C-terminal tandem array of Cys2His2 zinc-finger domains: 22 domains > 20 domains decreasing 6-fold Genome wide hot window usage in Crossing Over	Molecular Details of the Mutation
Linkage Mapping ( <a href="https://www.gephebase.org/search-criteria?/and+Experimental Evidence=^Linkage Mapping">#gephebase-summary-title)</a>	Experimental Evidence
Genetic variants in REC8, RNF212, and PRDM9 influence male recombination in cattle. (2012) ( <a href="https://pubmed.ncbi.nlm.nih.gov/22844258">https://pubmed.ncbi.nlm.nih.gov/22844258</a> )	Main Reference
Sandor C; Li W; Coppieters W; Druet T; Charlier C; Georges M	Authors
We use >250,000 cross-over events identified in >10,000 bovine sperm cells to perform an extensive characterization of meiotic recombination in male cattle. We map Quantitative Trait Loci (QTL) influencing genome-wide recombination rate, genome-wide hotspot usage, and locus-specific recombination rate. We fine-map three QTL and present strong evidence that genetic variants in REC8 and RNF212 influence genome-wide recombination rate, while genetic variants in PRDM9 influence genome-wide hotspot usage.	Abstract
	Additional References

## RELATED GEPHE

11 (CEP55, CPLX1, FMN1, GCLM, MSH4, NEK9, PABPN1, REC114, REC8, RNF212, SMC3) ( <a href="https://www.gephebase.org/search-criteria?/or+Taxon ID=^9913#/and+Trait=Recombination rate/and+groupHaplotypes=true">#gephebase-summary-title)</a>	Related Genes
2 ( <a href="https://www.gephebase.org/search-criteria?/or+Gene Gephebase=^PRDM9#/and+Taxon ID=^9913#/or+Gene Gephebase=^PRDM9#/and+Taxon ID=^9913">#gephebase-summary-title)</a>	Related Haplotypes

## EXTERNAL LINKS

## COMMENTS