

Genetic Recessives and Carrier Codes

C = carrier

F = tested free or non-carrier World Holstein-Friesian

Gene Name	Description	Gene and Expression Code
BLAD	Bovine Leukocyte Adhesion Deficiency (deficiency of a normally occurring protein needed for white blood cells or leukocytes, which are body's infection fighters)	BLC = tested carrier of BLAD BLF = tested non-carrier of BLAD
Mule foot	Mule-Foot (toes of foot are joined, giving animal a single hoof, instead of cloven ones)	MFC = tested carrier of Mule foot MFF = tested non-carrier of Mule foot
DUMPS	Deficiency of Uridine Monophosphate Synthase (one of many enzymes contributing to normal metabolic processes)	DPC = tested carrier of DUMPS DPF = tested non-carrier of DUMPS
CVM	Complex Vertebral Malformation (causes still-born calves, abortions, and early embryonic losses)	CVC = tested carrier of CVM CVF = tested non-carrier of CVM
Factor X1	Factor X1 (blood clotting disorder)	XIC = tested carrier of Factor X1 XIF = tested non-carrier of Factor X1
CIT	Citrullinemia (accumulation of ammonia and other toxics in blood in baby calves)	CNC = tested carrier of Citrullinemia CNF = tested non-carrier of Citrullinemia
Brachyspina	Brachyspina (causes abortion and stillborn, shortened spinal cord, long legs and abnormal organs)	BYC = tested carrier of Brachyspina BYF – tested non-carrier of Brachyspina
Polled	Animals without horns	PO = code POS = tested true polled (homozygous PP) POC = tested carrier of polled (heterozygous Pp) POF = tested free of polled

Coat Colour Carrier Gene	Description	Gene and Expression Code
Red	Red gene	RDC = carrier of red gene RDF = tested non-carrier of red gene
Black/Red	Black/red gene	BRC = carrier of black/red gene
Variant Red	Variant red gene	VRC = carrier of variant red gene
Black	Black gene	BKC = carrier of black gene

Haplotype	Description	Gene and Expression Code
Haplotype 1	Adverse fertility effects	HH1T = tested non-carrier HH1C = carrier
Haplotype 2	Adverse fertility effects	HH2T = tested non-carrier HH3C = carrier
Haplotype 3	Adverse fertility effects	HH3T = tested non-carrier HH3C = carrier
<p>*The above expression codes for haplotypes are not officially recognised by WHFF. Click here for further information CLICK HERE FOR HAPLOTYPE Q&A's</p>		