

Canine HealthCheck Comparison		Original CHC	Enhanced CHC Activation Code	New! Comprehensive CHC No Code Required
Disease or Trait Name	Gene(s)	Retired 11/20/19	Launched 11/20/19	Launched 11/20/19
A Locus (Agouti) - A <sup>v</sup>	ASIP	✓	✓	✓
A Locus (Agouti) - a <sup>w</sup> /a <sup>1</sup>	ASIP		✓	✓
A Locus (Agouti) - a	ASIP	✓	✓	✓
A <sup>s</sup> Locus (Saddle Tan)	RALY		✓	✓
B Locus (Brown) - b <sup>a</sup>	TYRP1		✓	✓
B Locus (Brown) - b <sup>c</sup>	TYRP1	✓	✓	✓
B Locus (Brown) - b <sup>d</sup>	TYRP1	✓	✓	✓
B Locus (Brown) - b <sup>s</sup>	TYRP1	✓	✓	✓
Brachycephaly	BMP3		✓	✓
Chondrodysplasia (CDPA)	FGF4		✓	✓
Cu Locus (Curly Hair)	KRT71	✓	✓	✓
D Locus (Dilute) - d <sup>1</sup>	MLPH	✓	✓	✓
D Locus (Dilute) - d <sup>2</sup>	MLPH		✓	✓
E Locus (Yellow/Red)	MC1R	✓	✓	✓
E <sup>8</sup> Locus (Grizzle, Afghan Hound)	MC1R		✓	✓
E <sup>11</sup> Locus (Sable, Cocker Spaniel)	MC1R		✓	✓
E <sup>m</sup> Locus (Melanistic Mask)	MC1R	✓	✓	✓
H Locus (Harlequin, Great Dane)	PSMB7		✓	✓
Hr Locus (FOXI3 Hairless Gene Test, Mexican/Peruvian Hairless & Chinese Crested)	FOXI3		✓	✓
I Locus (Intensity)	MFS12		✓	✓
IC Locus (Improper Coat/Furnishings)	RSPO2		✓	✓
K Locus (Dominant Black)	CBD103	✓	✓	✓
L Locus (Long Hair/Fluffy) - Lh <sup>1</sup>	FGF5	✓	✓	✓
L Locus (Long Hair/Fluffy) - Lh <sup>2</sup>	FGF5		✓	✓
M Locus (Merle)	PMEL		✓	✓
Polydactyly	LMBR1		✓	✓
S Locus (White Spotting, Parti, or Piebald)	MITF		✓	✓
SD Locus (Shedding)	MCSR		✓	✓
Sex Determination - X	AMELXY	✓	✓	✓
Sex Determination - Y	ZFY	✓	✓	✓
T Locus (Natural Bobtail)	T	✓	✓	✓
Acral Mutilation Syndrome (AMS, SN)	GDNF		✓	✓
Acute Respiratory Distress Syndrome (ARDS)	ANLN		✓	✓
Adult Paroxysmal Dyskinesia (PxD, cPxD)	PIGN		✓	✓
Alaskan Husky Encephalopathy (AHE)	SLC19A3	✓	✓	✓
Alaskan Malamute Polyneuropathy (AMPN)	NDRG1	✓	✓	✓
Amelogenesis Imperfecta (AI, ARAO)	ENAM	✓	✓	✓
Benign Familial Juvenile Epilepsy (BFJE)	LG12	✓	✓	✓
Canine Multiple System Degeneration (Chinese Crested) (CMSD)	SERAC1	✓	✓	✓
Canine Multiple System Degeneration (Kerry Blue Terrier) (CMSD, PNA)	SERAC1	✓	✓	✓
Canine Scott Syndrome (CSS)	ANO6		✓	✓
Catalase Deficiency	CAT		✓	✓
Centronuclear Myopathy (CNM)	PTPLA		✓	✓
Cerebellar Ataxia (Finnish Hound)	SEL1L	✓	✓	✓
Cerebellar Cortical Degeneration	SNX14		✓	✓
Cerebellar Degeneration (HA, CA)	RAB24		✓	✓
Chondrodysplasia (Karelian Bear Dog & Norwegian Elkhound)	ITGA10	✓	✓	✓
Cleft Palate & Syndactyly (Nova Scotia Duck Tolling Retriever) (CP1, CLPS)	ADAMTS20		✓	✓
Coagulation Factor VII Deficiency	F7	✓	✓	✓
Collie Eye Anomaly (CEA, CH)	NHEJ1	✓	✓	✓
Complement 3 Deficiency	C3	✓	✓	✓
Cone Degeneration (CD)	CNGB3	✓	✓	✓
Cone Degeneration (German Shepherd Dog) (CD)	CNGA3		✓	✓
Cone Degeneration (German Shorthaired Pointer) (CD)	CNGB3	✓	✓	✓
Cone Degeneration (Labrador Retriever) (CD)	CNGA3		✓	✓
Congenital Hypothyroidism w/ Goiter (Terrier) (CHG)	TPO		✓	✓
Congenital Methemoglobinemia	CYB5R3		✓	✓
Congenital Myasthenic Syndrome (Jack Russell Terrier) (CMS)	CHRNE		✓	✓
Congenital Myasthenic Syndrome (Labrador Retriever) (CMS)	COLQ	✓	✓	✓
Congenital Myasthenic Syndrome (Old Danish Pointer) (CMS)	CHAT	✓	✓	✓
Congenital Stationary Night Blindness (CSNB, LCA)	RPE65	✓	✓	✓
Craniomandibular Osteopathy (CMO)	SLC37A2		✓	✓
Cyclic Neutropenia (CH, CN)	AP3B1		✓	✓
Cystinuria (Australian Cattle Dog)	SLC3A1	✓	✓	✓
Cystinuria (Labrador Retriever)	SLC3A1		✓	✓
Cystinuria (Miniature Pinscher)	SLC7A9	✓	✓	✓
Cystinuria (Newfoundland)	SLC3A1	✓	✓	✓
Cystinuria Type 3 (Bulldog Risk Factor, Variants 1 & 2)	SLC3A1		✓	✓
Cystinuria Type 3 (Bulldog Risk Factor, Variant 3)	SLC7A9		✓	✓
Dandy-Walker-Like Malformation	VLDLR		✓	✓
Degenerative Myelopathy (Common Variant) (DM)	SOD1	✓	✓	✓
Degenerative Myelopathy (Bernese Mountain Dog Variant) (DM)	SOD1		✓	✓

Degenerative Myelopathy Modifier (Pembroke Welsh Corgi) (DM)	SP110		✓	✓
Dental Hypomineralization	FAM20C			✓
Diffuse Cystic Renal Dysplasia & Hepatic Fibrosis	INPP5E			✓
Dilated Cardiomyopathy (Doberman Pinscher Risk Factor, Variant 1) (DCM)	PDK4	✓	✓	✓
Dilated Cardiomyopathy (Doberman Pinscher Risk Factor, Variant 2) (DCM)	TTN			✓
Dilated Cardiomyopathy (Schnauzer) (DCM)	RBM20			✓
Dry Eye Curly Coat Syndrome (CKSID)	FAM83H	✓	✓	✓
Dystrophic Epidermolysis Bullosa (DEB, EB, RDEB)	COL7A1	✓	✓	✓
Early Retinal Degeneration (ERD)	STK38L	✓	✓	✓
Ectodermal Dysplasia (Chesapeake Bay Retriever) (ED)	PKP1	✓	✓	✓
Ectodermal Dysplasia, X-Linked (Dachshund) (XLHED)	EDA			✓
Ectodermal Dysplasia, X-Linked (Shepherd) (XHED, XLED)	EDA	✓	✓	✓
Ehlers-Danlos Syndrome (Variant 1) (EDS)	TNXB			✓
Ehlers-Danlos Syndrome (Variant 2) (EDS)	TNXB			✓
Elliptocytosis	SPTB	✓	✓	✓
Epidermolytic Hyperkeratosis	KRT10	✓	✓	✓
Episodic Falling Syndrome (EDFS)	BCAN		✓	✓
Exercise-Induced Collapse (EIC)	DNM1	✓	✓	✓
Factor XI Deficiency	F11			✓
Familial Nephropathy (Cocker Spaniel) (FN, HN)	COL4A4	✓	✓	✓
Familial Nephropathy (English Springer Spaniel) (FN, HN)	COL4A4	✓	✓	✓
Fucosidosis	FUCA1			✓
Gallbladder Mucoceles	ABCB4	✓	✓	✓
Glanzmann's Thrombasthenia (Great Pyrenees) (GT)	ITGA2B	✓	✓	✓
Glanzmann's Thrombasthenia (Otterhound) (GT)	ITGA2B	✓	✓	✓
Glaucoma (Border Collie Type) (PCAD)	OLFML3			✓
Globoid Cell Leukodystrophy (Irish Setter) (GLD)	GALC	✓	✓	✓
Globoid Cell Leukodystrophy (Terrier) (GLD)	GALC	✓	✓	✓
Glycogen Storage Disease Ia (GSD Ia, GSD1a)	G6PC	✓	✓	✓
Glycogen Storage Disease IIIa (GSD IIIa)	AGL	✓	✓	✓
Glycogen Storage Disease VII (Wachtelhund) (GSD VII, PFK deficiency)	PFKM	✓	✓	✓
Glycogen Storage Disease VII, PFK Deficiency (GSD VII, PFK deficiency)	PFKM	✓	✓	✓
GM1 Gangliosidosis (Alaskan Husky)	GLB1	✓	✓	✓
GM1 Gangliosidosis (Portuguese Water Dog)	GLB1	✓	✓	✓
GM1 Gangliosidosis (Shiba Inu)	GLB1	✓	✓	✓
GM2 Gangliosidosis (Japanese Chin)	HEXA	✓	✓	✓
GM2 Gangliosidosis (Poodle)	HEXB	✓	✓	✓
Greyhound Polyneuropathy	NDRG1	✓	✓	✓
Hemophilia A (Boxer Type)	F8	✓	✓	✓
Hemophilia A (German Shepherd Dog, Type 1)	F8	✓	✓	✓
Hemophilia A (German Shepherd Dog, Type 2)	F8	✓	✓	✓
Hemophilia B (Cairn Terrier)	F9	✓	✓	✓
Hemophilia B (Lhasa Apso)	F9	✓	✓	✓
Hemophilia B (Rhodesian Ridgeback)	F9	✓	✓	✓
Hereditary Cataracts (HC, JC)	HSF4	✓	✓	✓
Hereditary Cataracts (Australian Shepherd) (HC, HSF4, JC)	HSF4	✓	✓	✓
Hereditary Footpad Hyperkeratosis (Irish Terrier & Kromfohländer)	FAM83G	✓	✓	✓
Hereditary Nasal Parakeratosis (HNPK)	SUV39H2	✓	✓	✓
Hereditary Nasal Parakeratosis (Greyhound) (HNPK)	SUV39H2	✓	✓	✓
Hereditary Nephritis (Samoyed) (AS, HN, XLHN)	COL4A5	✓	✓	✓
Hyperuricosuria (HUU)	SLC2A9	✓	✓	✓
Hypomyelination (Weimaraner) (HYM, HS)	FNIP2			✓
Ichthyosis (American Bulldog)	NIPAL4		✓	✓
Ichthyosis (Golden Retriever)	PNPLA1	✓	✓	✓
Ichthyosis (Great Dane)	SLC27A4			✓
Inherited Myopathy of Great Danes (IMGD)	BIN1	✓	✓	✓
Intervertebral Disc Disease & Chondrodystrophy (IVDD)	FGF4			✓
Intestinal Cobalamin Malabsorption (Beagle) (I-GS)	CUBN	✓	✓	✓
Intestinal Cobalamin Malabsorption (Border Collie)	CUBN	✓	✓	✓
Juvenile Laryngeal Paralysis & Polyneuropathy (JLPP, POANV)	RAB3GAP1	✓	✓	✓
Juvenile Myoclonic Epilepsy (Rhodesian Ridgeback)	DIRAS1		✓	✓
L-2-Hydroxyglutaric Aciduria (Staffordshire Bull Terrier) (I-2-HGA)	L2HGDH	✓	✓	✓
Lagotto Storage Disorder (LSD)	ATG4D			✓
Late Onset Ataxia (LOA, SCA)	CAPN1	✓	✓	✓
Lethal Acrodermatitis (LAD)	MLKN1			✓
Leukocyte Adhesion Deficiency, Type I (CLAD, LAD-A)	ITGB2	✓	✓	✓
Leukocyte Adhesion Deficiency, Type III (CLAD, LAD-III)	FERMT3	✓	✓	✓
Ligneous Membranitis (LM)	PLG		✓	✓
Lundehund Syndrome (LS)	LEPREL1			✓
Macular Corneal Dystrophy (Labrador Retriever) (MCD)	CHST6			✓
May-Hegglin Anomaly (MHA)	MYH9	✓	✓	✓
Mucopolysaccharidosis I (MPS I)	IDUA	✓	✓	✓
Mucopolysaccharidosis IIIA (Dachshund) (MPS IIIA)	SGSH	✓	✓	✓
Mucopolysaccharidosis IIIA (New Zealand Huntaway) (MPS IIIA)	SGSH	✓	✓	✓
Mucopolysaccharidosis VII (Shepherd) (MPS VII)	GUSB	✓	✓	✓
Multidrug Resistance 1 (MDR1)	ABCB1	✓	✓	✓
Multifocal Retinopathy 1 (CMR1)	BEST1	✓	✓	✓

Multifocal Retinopathy 2 (CMR2)	BEST1	✓	✓	✓
Multifocal Retinopathy 3 (CMR3)	BEST1	✓	✓	✓
Muscular Dystrophy (Golden Retriever) (DMD, GRMD)	DMD	✓	✓	✓
Musladin-Lueke Syndrome (MLS)	ADAMTSL2		✓	✓
Myostatin Deficiency (Whippet & Longhaired Whippet)	MSTN	✓	✓	✓
Myotonia Congenita (Australian Cattle Dog)	CLCN1	✓	✓	✓
Myotonia Congenita (Schnauzer)	CLCN1	✓	✓	✓
Myotubular Myopathy 1 (MTM1, XLMTM)	MTM1		✓	✓
Myotubular Myopathy 1 (Rottweiler) (MTM1, XLMTM)	MTM1		✓	✓
Narcolepsy (Dachshund)	HCRTR2	✓	✓	✓
Narcolepsy (Doberman Pinscher)	HCRTR2	✓	✓	✓
Narcolepsy (Labrador Retriever)	HCRTR2	✓	✓	✓
Neonatal Cerebellar Cortical Degeneration (NCCD)	SPTBN2	✓	✓	✓
Neonatal Encephalopathy w/ Seizures (NEWS)	ATF2	✓	✓	✓
Neuroaxonal Dystrophy (Rottweiler) (NAD)	VPS11		✓	✓
Neuroaxonal Dystrophy (Spanish Water Dog) (NAD)	TECPR2		✓	✓
Neuronal Ceroid Lipofuscinosis (Tibetan Terrier) (NCL)	ATP13A2	✓	✓	✓
Neuronal Ceroid Lipofuscinosis 1 (NCL, NCL1)	PPT1	✓	✓	✓
Neuronal Ceroid Lipofuscinosis 1 (Cane Corso) (NCL, NCL1)	PPT1		✓	✓
Neuronal Ceroid Lipofuscinosis 10 (NCL, NCL10)	CTSD	✓	✓	✓
Neuronal Ceroid Lipofuscinosis 12 (NCL, NCL12)	ATP13A2		✓	✓
Neuronal Ceroid Lipofuscinosis 2 (NCL, NCL2)	TPP1	✓	✓	✓
Neuronal Ceroid Lipofuscinosis 4A (NCL, NCL4A)	ARSG	✓	✓	✓
Neuronal Ceroid Lipofuscinosis 5 (Australian Cattle Dog/Border Collie) (NCL, NCL5)	CLN5	✓	✓	✓
Neuronal Ceroid Lipofuscinosis 5 (Golden Retriever) (NCL, NCL5)	CLN5		✓	✓
Neuronal Ceroid Lipofuscinosis 6 (NCL, NCL6)	CLN6	✓	✓	✓
Neuronal Ceroid Lipofuscinosis 7 (NCL, NCL7)	MFSDB		✓	✓
Neuronal Ceroid Lipofuscinosis 8 (Australian Shepherd) (NCL, NCL8)	CLN8	✓	✓	✓
Neuronal Ceroid Lipofuscinosis 8 (Setter) (NCL, NCL8)	CLN8	✓	✓	✓
Oculocutaneous Albinism (OCA)	SLC45A2			✓
Oculocutaneous Albinism (Small Breed) (OCA)	SLC45A2			✓
Osteochondrodysplasia	SLC13A1			✓
Osteogenesis Imperfecta (Beagle) (OI)	COL1A2	✓	✓	✓
Osteogenesis Imperfecta (Dachshund) (OI)	SERPINH1		✓	✓
Osteogenesis Imperfecta (Golden Retriever) (OI)	COL1A1	✓	✓	✓
P2RY12 Receptor Platelet Disorder	P2RY12	✓	✓	✓
Pembroke Welsh Corgi Duchenne Muscular Dystrophy (DMD)	DMD		✓	✓
Persistent Müllerian Duct Syndrome (PMDS)	AMHR2	✓	✓	✓
Polyneuropathy (Leonberger & Saint Bernard) (PN)	ARHGFB10	✓	✓	✓
Polyneuropathy (Leonberger Type 2) (PN, LPN2)	GJA9		✓	✓
Polyneuropathy w/ Ocular Abnormalities & Neuronal Vacuolation (POANV, WMS1)	RAB3GAP1		✓	✓
Pompe Disease (GSD II)	GAA	✓	✓	✓
Prekallikrein Deficiency	KLKB1	✓	✓	✓
Primary Ciliary Dyskinesia (PCD)	CCDC39	✓	✓	✓
Primary Hyperoxaluria (PH1)	AGXT	✓	✓	✓
Primary Lens Luxation (PLL)	ADAMTS17	✓	✓	✓
Primary Open Angle Glaucoma & Primary Lens Luxation (Shar Pei) (POAG/PLL)	ADAMTS17		✓	✓
Primary Open Angle Glaucoma (POAG)	ADAMTS10	✓	✓	✓
Primary Open Angle Glaucoma (Basset Fauve de Bretagne) (POAG)	ADAMTS17		✓	✓
Primary Open Angle Glaucoma (Basset Hound) (POAG)	ADAMTS17		✓	✓
Primary Open Angle Glaucoma (Norwegian Elkhound) (POAG)	ADAMTS10		✓	✓
Progressive Retinal Atrophy (Basenji) (PRA)	SAG	✓	✓	✓
Progressive Retinal Atrophy (Bullmastiff/Mastiff) (PRA-D)	RHO	✓	✓	✓
Progressive Retinal Atrophy (Giant Schnauzer) (PRA, PRA5)	NECAP1		✓	✓
Progressive Retinal Atrophy (Irish Setter) (PRA-rcd1)	PDE6B	✓	✓	✓
Progressive Retinal Atrophy (Shetland Sheepdog) (CNGA1-PRA, PRA)	CNGA1		✓	✓
Progressive Retinal Atrophy (Sloughi Type) (PRA-rcd1a)	PDE6B	✓	✓	✓
Progressive Retinal Atrophy, Cone-Rod Dystrophy (PRA-crd)	NPHP4		✓	✓
Progressive Retinal Atrophy, Cone-Rod Dystrophy 1 (PRA-crd1)	PDE6B	✓	✓	✓
Progressive Retinal Atrophy, Cone-Rod Dystrophy 2 (PRA-crd2)	IQCB1		✓	✓
Progressive Retinal Atrophy, Cone-Rod Dystrophy 4 (crd4/crd1) (PRA-crd4/crd1)	RPGRI1		✓	✓
Progressive Retinal Atrophy, Generalized (Gpra)	CCDC66	✓	✓	✓
Progressive Retinal Atrophy, Golden Retriever 1 (GR-PRA, GR1-PRA)	SLC4A3	✓	✓	✓
Progressive Retinal Atrophy, Golden Retriever 2 (GR-PRA2, GR2-PRA)	TTC8	✓	✓	✓
Progressive Retinal Atrophy, PRA1 (Papillon Type) (PRA, PRA1)	CNGB1	✓	✓	✓
Progressive Retinal Atrophy, PRA3 (Tibetan Terrier & Spaniel Type) (PRA3)	FAM161A		✓	✓
Progressive Retinal Atrophy, PRCD (PRA-prcd, PRCD)	PRCD	✓	✓	✓
Progressive Retinal Atrophy, Rod-Cone Dysplasia 3 (PRA-rcd3)	PDE6A	✓	✓	✓
Progressive Retinal Atrophy, Rod-Cone Dysplasia 4 (PRA-rcd4)	C2ORF71		✓	✓
Progressive Retinal Atrophy, X-Linked 1 (XLPRA1)	RPGR		✓	✓
Protein Losing Nephropathy - Variant 1 (PLN)	KIRREL2		✓	✓
Protein Losing Nephropathy - Variant 2 (PLN)	NPHS1		✓	✓
Pyruvate Dehydrogenase Deficiency (PDP1)	PDP1	✓	✓	✓
Pyruvate Kinase Deficiency (Basenji) (PKD)	PKLR	✓	✓	✓
Pyruvate Kinase Deficiency (Beagle) (PKD)	PKLR	✓	✓	✓
Pyruvate Kinase Deficiency (Labrador Retriever) (PKD)	PKLR	✓	✓	✓
Pyruvate Kinase Deficiency (Pug Type) (PKD)	PKLR	✓	✓	✓

Pyruvate Kinase Deficiency (Terrier) (PKD)	PKLR	✓	✓	✓
Recurrent Inflammatory Pulmonary Disease (IPD)	AKNA			✓
Renal Cystadenocarcinoma & Nodular Dermatofibrosis	FLCN	✓	✓	✓
Retinal Dysplasia/Oculoskeletal Dysplasia 1 (OSD1, DRD1, RD/OSD1)	COL9A3			✓
Retinal Dysplasia/Oculoskeletal Dysplasia 2 (OSD2, DRD2, RD/OSD2)	COL9A2			✓
Sensory Neuropathy (Border Collie Type) (SN)	FAM134B			✓
Severe Combined Immunodeficiency Disease (Terrier) (SCID)	PRKDC	✓	✓	✓
Severe Combined Immunodeficiency Disease (Wetterhound) (SCID)	RAG1	✓	✓	✓
Severe Combined Immunodeficiency Disease, X-Linked (Basset Hound) (XSCID)	IL2RG	✓	✓	✓
Severe Combined Immunodeficiency Disease, X-Linked (Corgi) (XSCID)	IL2RG	✓	✓	✓
Shar-Pei Autoinflammatory Disease (SPAID)	MTBP		✓	✓
Skeletal Dysplasia 2 (SD2)	COL11A2	✓	✓	✓
Spinal Dysraphism	NKX2-8	✓	✓	✓
Spinocerebellar Ataxia (SCA)	KCNJ10	✓	✓	✓
Spondylocostal Dysostosis (SCD)	HES7			✓
Stargardt Disease (STGD)	ABCA4			✓
Startle Disease	SLC6A5	✓	✓	✓
Thrombopathia (American Eskimo Dog)	RASGRP1	✓	✓	✓
Thrombopathia (Basset Hound)	RASGRP1	✓	✓	✓
Thrombopathia (Newfoundland)	RASGRP1	✓	✓	✓
Trapped Neutrophil Syndrome (TNS)	VPS13B	✓	✓	✓
Urolithiasis (Native American Indian Dog)	APRT			✓
Van Den Ende-Gupta Syndrome (VDEGS)	SCARF2			✓
Von Willebrand Disease I (VWDI)	VWF	✓	✓	✓
Von Willebrand Disease II (VWDII)	VWF	✓	✓	✓
Von Willebrand Disease III (Kooikerhondje) (VWDIII)	VWF	✓	✓	✓
Von Willebrand Disease III (Scottish Terrier) (VWDIII)	VWF	✓	✓	✓
Von Willebrand Disease III (Shetland Sheepdog) (VWDIII)	VWF		✓	✓
		<b>155</b>	<b>179</b>	<b>254</b>