

The White Doberman

Judy Doniere, DPCA member, breed enthusiast and breeder, was the voice sounding the alarm on the white Doberman trend. She fought hard to bring attention to the matter and to preserve the standard¹. The first investigation into the white Doberman by the DPCA was to talk to the breeder and record/photograph his white dogs. Bill Garnett, AKC judge, Breeder, and Exhibitor Education, was certain they were purebred; noting they were of good conformation, but had observed sensitivity to light, and possibly depth perception issues. Many of the DPCA Board of Directors felt the whites were not an issue worth acting on. After years of research and much prodding from a few concerned members the DPCA finally moved against supporting/ignoring the white/albino. The DPCA then went to the AKC to request limitations be placed on the breeding of white Doberman. The first attempt to limit breeding/registration of albino Doberman was in 1994; the AKC refused to restrict registration of the whites. The AKC, although unwilling to stop the ability to register any white or dog related to Sheba, agreed with the DPCA that the Sheba line was too risky to the breed's reputation and overall disposition. In June 1994 the AKC agreed to track all dogs originating from Sheba; the Z factor was born.

The first white Doberman originated from a kennel in TN but were not registered.² A pet-line breeder Virginia was the first to register and breed for albinos, per the official record. In 1974 Padula's Queen Sheba (registration number WE166747), incorrectly labeled a white bitch, was the first albino Doberman to be registered. She was the only known albino at the time and thus far no other lines have produced albinos. She was bred to her son Tarzan, a black dog, to produce the whites (albinos) after he was bred to his sister and they produced a litter with two whites.

In 1996 hairs from Sheba were sent to a DVM geneticist for evaluation. He sent a letter explaining his review of the sample;

"Dear Mrs. Doniere:

In regard to the question of "White" Dobermans, although I have had limited samples to work with (one white Doberman), I have compared this individual to samples obtained from some of the breeds which we tend to accept as "normal" white (i.e.- Samoyeds, Great Pyreneese, Kuvasok, Bichon Frises, and American Eskimo Dogs). Although it is true that all dogs in all of these breeds are not necessarily "all" white, the coats of the ones sampled were all white.

The coats of the "white" Dobermans differ from the above breeds in one or more of the following parameters: size of pigment granules, shape of pigment granules, number of pigment granules, and hair

¹ <https://dpca.org/BreedEd/albino-doberman-history/>

² <https://dpca.org/BreedEd/albino-doberman-history/>

diameter and uniformity. In other words, these dogs are not a “normal” white as we have tended to accept it.

I would agree with Dr. Patterson’s suggestions (1982) that this is probably a mutation in the C series. I believe it is an albino, although not the classical pink-eyed, tyrosine negative animal which we associate with this term. They are phototypic and I believe there is little disagreement with this statement.

*Sincerely,
George A. Padgett, DVM
Professor of Pathology”*

By microscopic examination the hairs showed typical albinism characteristics! This was the evidence needed to confirm Judy’s suspicions. The White Doberman Pinscher

White or Albino?

The issue of white vs albino is due to an exchange between the AKC and Mr. Padula regarding registration of Sheba. Originally, Mr. Padula wrote in “albino” as the coat color, but his application certificate was returned with a letter stating “albino is not a color”. The AKC requested he provide photos of his dog and to resubmit the registration application. Mr. Padula complied and in return he received a letter from the AKC saying the following:

*“Dear Mr. Padula:
Breed: Doberman Pinscher
Litter number WM 361038,*

This will acknowledge receipt of your recent correspondence and photographs of the female you acquired from the above litter. The photographs you submitted were examined by the registration review committee, and it was the opinion of this committee, that the color of this female is white.

*Your application for individual registration has been forwarded to our processing department.
Thank you for your cooperation.*

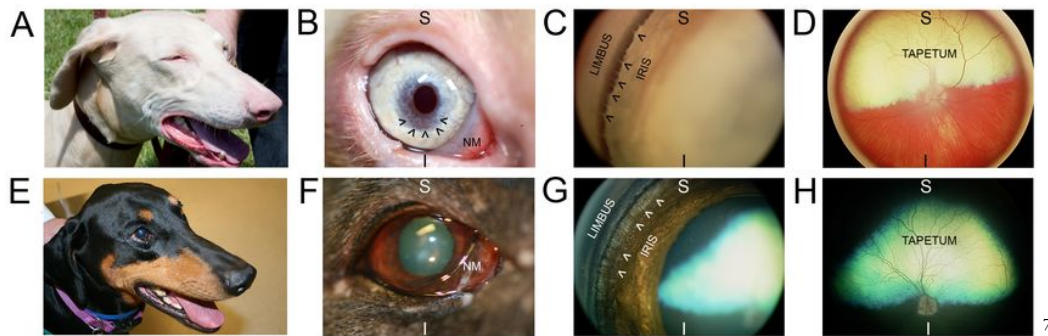
*Very truly yours,
Dorothy Ott
The American Kennel Club”*

The AKC did not seek the approval or advice of the national breed club, the DPCA, regarding the color. Instead, they made the decision to add "white" as a new coat color. The AKC made a grave error in not requesting the DPCA’s assistance inadvertently creating the largest rift in the breed thus far; the white VS albino debate. The facts are the “white” Doberman is albino, and the AKC was wrong in their actions to add white as a color option. In an attempt to remedy the situation the AKC includes a sheet with all Doberman registration packets detailing the albino/Z factor and why it should not be bred.

Fact: They are Albinistic and NOT Leucistic

Albinism is a spectrum³, with there being up to seven forms and many more subtypes⁴. The "white" Doberman is scientifically a tyrosinase positive albino, aka OCA2 (oculocutaneous albinism type 2).⁵ "White" Doberman have all the traits of albinism; pink skin, white/colorless hair, blue eyes, and characteristic health issues. One important characteristic to note is albinism, unlike leucism, lacks pigmented cells. Over the last 25 years many geneticists and veterinarians have helped study the albino Doberman, including Dr. John Paul Scott, BGSU, Regents Professor of Psych., Dr. Donald Patterson, DVM, University of Pennsylvania, Dr. D.J. Prueur, Wash. State University, Dept. of Veterinarian Micro Pathology, Dr. Charles Parshall, Ohio State, Department of Ophthalmology, Dr. Mark Ladd, University of Surrey England, Geneticist, Dr. Jeff Hogans, DVM, Dr. May Jacobson, PH.D. In 2014 scientists Paige A. Winkler, Kara R. Gornik, David T. Ramsey, Richard R. Dubielzig, Patrick J. Venta, Simon M. Petersen-Jones, and Joshua T. Bartoe discovered the final proof, the exact gene responsible for the white color; SLC45A2. It requires two defective gene mutations to produce the white (albino) color. Some dogs carry the SLC45A2 mutation and are of standard color. Two carriers can produce albinos. The majority of z factored Doberman genetically only carry the traditional color genes. Most z dogs are not capable of producing albinos because not every z dog carries the albinism mutation. It is a recessive gene and can be bred out of the breed. Regardless if a carrier or not all dogs related to Sheba are z factored.

Many white advocates deny the status as an albino and believe the whites are simply a coat color or that they are leucistic and carry "traces" of pigment. Often they defend their stance saying a white "can't be albino" because they have blue eyes, lack red or pink eyes, test genetically as a standard coat color. While upon initial look the white Doberman appears leucistic, it is not. Leucism as defined by wikipedia is "a term used to describe a wide variety of conditions which result in the partial loss of pigmentation in an animal—which causes white, pale, or patchy coloration of the skin, hair, feathers, scales or cuticles, but not the eyes"⁶.



"The black arrowheads (in B) demarcate a region of significant iridal stromal thinning that was noted on examination to transilluminate (not shown in image) with retroillumination by light reflected from the tapetum lucidum."

³<https://sciencemadefun.net/blog/leucism-vs-albinism/#:~:text=Albinism%20is%20a%20condition%20in,hair%20and%20eyes%20their%20color.&text=Leucism%20is%20only%20a%20partial,skin%2C%20hair%2C%20or%20feathers.>

⁴ <https://www.albinism.org/information-bulletin-what-is-albinism/>

⁵ <https://www.uniprot.org/uniprot/F1P69>

⁶ [https://en.wikipedia.org/wiki/Leucism#:~:text=Leucism%20\(%2F%CB%88lu%CB%90s,cuticles%2C%20but%20not%20the%20eyes.](https://en.wikipedia.org/wiki/Leucism#:~:text=Leucism%20(%2F%CB%88lu%CB%90s,cuticles%2C%20but%20not%20the%20eyes.)

⁷ https://www.researchgate.net/figure/Ocular-phenotype-of-white-Doberman-pinschers-Images-taken-from-WDP-top-row-and-black_fig10_260950454

The white Doberman lacks pigmented cells in the eyes. The traditional eye color spectrum for breed is between amber and black-brown. The pale blue is a result of little to no melanin in the iris.

Health of the Albino Doberman

The largest concern with the white Doberman is their health. Nearly all the issues they can have legitimately stem from the gene mutation causing albinism. The tight inbreeding to produce whites further complicates their delicate health. The health problems associated with Zs come directly from the nature of being albino (white/cream dogs); 3) photophobia, melanocystic tumors, skin sensitivity, prone to sunburn, cognitive delay or limitations (slow), deafness/blindness (rare, but is caused by what we call extreme white), optical/retinal mutations (again, rare but happens), skin cancer,⁸ organ malfunction or under functioning (typically thyroid, liver and kidneys; due to a predisposition to autoimmune issues), overall predisposition to allergies and sensitivities. The lack of melanin predisposes albinos to these problems even more so than traditional colored dogs. The standard colored dogs are less likely to be deaf, blind or have sunburn since they carry pigment. There is some credibility to Z dogs having more temperament issues, mostly due to tight inbreeding or poor rearing conditions. The sensitivities that come with the albino's color can also lend to more temperament and mood instability as the dogs are often uncomfortable, in pain and can not see as well. While Doberman as a breed are prone to similar issues (skin sensitivity, food allergies, food intolerance, and even temperament trouble) it is not as prevalent as it is in the whites.

"Biomicroscopy showed all WDP had hypopigmented adnexal structures including eyelid margins, leading edge of the nictitating membrane, and cilia (Figure 2 B); whereas these structures were darkly pigmented in SDPs (Figure 2 F). The irides of all WDPs were tan in the peripheral ciliary zone transitioning to blue towards the pupillary zone, the pupils showed vertically-oriented ovoid dyscoria, and had patchy stromal thinning adjacent to the pupillary aperture (Figure 2 B); these areas of stromal thinning were observed to transilluminate with retro-illumination during the ocular examinations. Irides of all SDPs were dark brown in color with round pupillary apertures (Figure 2 F) and no defects were noted with transillumination. Occasionally iridociliary cysts (WDP: 4 of 20, mean age 6.7 ± 2.9 yr [range 3–10 yr]; SDP: 0 of 20; $p = 0.15$) and incipient cortical cataracts were observed (WDP: 4 of 20, mean age 7.5 ± 2.5 yr [range 7–11 yr]; SDP: 1 of 20, age 11; $p = 0.15$). Gonioscopy showed the pectinate ligament was similar in coloration to the iridal stroma: tan in WDPs (Figure 2 C) and dark brown in SDPs (Figure 2 G). Indirect ophthalmoscopy revealed all WDP had profound hypopigmentation of the retinal pigment epithelium and choroid, making the choroidal vasculature readily apparent in the non-tapetal fundus (Fig. 2 D). In all SDPs, the retinal pigment epithelium and choroid were both heavily pigmented in the non-tapetal fundus (Fig. 2 H).

Careful examination of the skin revealed a significantly increased prevalence of tumors in WDPs (12 of 20, [<5 years of age: 4 of 12; >5 years of age: 8 of 8]) compared with SDPs (1 of 20, $p < 0.0001$). In WDPs multiple tumors were frequently observed (10 of 20), and locations included the skin and lips (12 of 20 dogs), eyelids (10 of 20 dogs), and iris (1 of 20 dogs) (Figure 3 A–D). Tumors of WDPs ranged in size from 1 mm to

⁸ <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0092127>

approximately 20 mm, in color from light brown to dark burgundy, and in shape from flat to raised to pedunculated. The tumors on WDP were noted on both dorsal and ventral aspects of the body and the apparently random distribution did not suggest a predilection for sites with maximum ultraviolet light exposure. Only one SDP was found to have a single darkly pigmented 2 mm superior eyelid mass.”⁹

Can A Z or Albino Doberman Earn Titles? YES!

While uncommon, there have been several Z dogs to title and whom excelled in various competition:

- Kasper Blanco Schnepf CD, WP61614201, Male Doberman Pinscher, white, born 3/13/95
- The Warriors Magic Crystal CD, WP32599306, Male Doberman Pinscher, white, born 12/11/90
- Mousethatroared Von Ernest CD, WP49530405, Female Doberman Pinscher, white, born 6/14/93
- Kathy Bates' Ice Phantom CD NAJ, WP69373608, Male Doberman Pinscher, white, born 4/7/96
- My Fair Lady Lexus CDX, ILP99023, Female Doberman Pinscher, white, born ?
- Lornich's Lunar Ice CD, WZ00200005, Female Doberman Pinscher, white, born 4/9/2001
- Wisteria's Vanilla Frosting NJP, WZ00133704, Male Doberman Pinscher, white, born 2/5/2000

Anyone who tells you albinos and Zs can't be titled is misinformed. There have been many dogs to compete and earn titles in obedience, tracking, canine good citizenship, sport, agility, and more. Z dogs can compete in all areas except conformation. The white is an immediate disqualification in the show ring because it is a breed fault, a DPCA unaccepted color.

Jackson's Kennel Stance:

As a breeder and breed advocate I can not condone the breeding of albino Doberman nor the breeding of the SLC45A2 gene mutation. The science is clear on the matter; "white" Doberman are albino and are prone to more health issues. The Doberman breed deserves total dedication to longevity and optimal health. I don't believe there is a good reason to break away from the traditional breed color standard. Albino dogs are not the best representation of the breed nor do they help promote better dogs for the future. A z factored Doberman should be avoided. A reputable breeder will not breed a Z dog nor would breed for albino. Keep in mind purebred isn't always well-bred. Take time to get to know the dog, the pedigree, what ethics the breeder holds, and breeder themselves before you buy a puppy. Supporting ethical breeders, who truly care about the breed and its future, is more important than a popular pedigree or flashy colors.

Interesting Fact: White Doberman come in two shades:

1. Dondo - a dirty, grey shade
2. Cornaz - a sandy shade

⁹https://www.researchgate.net/publication/260950454_A_Partial_Gene_Deletion_of_SLC45A2_Causes_Oculocutaneous_Albinism_in_Doberman_Pinscher_Dogs

3. A LETTER FROM A CONCERNED ALBINO/WHITE DOBERMAN OWNER

"We purchased our White Doberman about two and one half years ago. We'd had him for several months and he was the sweetest dog so we begged the breeder's name from the pet store where we bought him and wrote a nice letter to the breeder. We never received an acknowledgment.

In June of 2000, a few months after we got him, he quit eating and we noticed how sensitive his eyes were to sunlight. Eventually his eyes became so bad we thought he would go blind. We took him to a dog eye doctor and had a specialist working on his immune system. We had to force feed him according to our vet's instructions and finally we discovered he would eat braunsweiger sandwiches and peanut butter sandwiches. He had gotten down to 58 pounds. He was put on prednisone some time during this time and eventually gained to 90+ pounds.

All through this he was a sweet dog. I took him to obedience school and considered myself the Alpha – he obeyed every command I gave him, on or off lead, and continued to for a long time after obedience school was

finished. But I began to notice that he was getting slower (or perhaps stubborn) in obeying. It occurred to me that he was having trouble understanding. He'd cock his head from side to side and just didn't seem to understand new things. He became very skittish; afraid of a grocery bag out of place. Same with clothes on the laundry room floor. He was never afraid or timid with people though. He loved everyone he met.

About six months ago he began to show aggressive behavior. He snapped at my husband and we chalked it up to the fact that he could not see well. He became food aggressive (I have two other dogs) and bit my husband when he was feeding them. My husband was laying on the bed with him and Lugar's paw was resting on my husband's hand. My husband asked himself, "should I wake him before I move my hand" – he did not, and the dog attacked him and left many puncture wounds in his hand. Night before last my husband was showing me a place on Lugar's face that he thought needed attention – perhaps a washing and hydrogen peroxide. I

didn't get to see the area because Lugar suddenly attacked him. My husband was able to jump out of his way but it was awhile before the stare-down and the curling lips subsided.

At this point my husband was a little apprehensive about the dog. We treat his eyes every day and my husband decided, since I was the Alpha that I should perhaps do the honors. I was doing just that last night, treating the second eye, when he attacked me ferociously, biting and shaking my arm from just below my elbow to my wrist. He released me and attacked me a second time. I had to go to the emergency room and have stitches and the other punctures seen to. We locked him up for the night. My husband is now at the vet having him put down, as we would never pass off an animal like that to any one else.

We were told this animal was "albinistic" – but NOT Albino. We were told he can't be Albino because he has blue eyes, as opposed to pink eyes. We believe they should not be bred nor able to receive AKC standing. I will write a letter to AKC also. Thanks.

*Published at the request of the writer,
Evie Foggy,
New Port Richey, FL, USA"*

The Melanistic Doberman

5) Melanism in Doberman is due to a genetic mutation. There are three potential causes of a "solid" Doberman;

E locus - em/em Masking Gene (Extreme Masking)

A Locus - a/a Recessive Black

K Locus - a single KB/ky and KB/KB on the K locus produce a solid, Dominant Black

<http://www.doggenetics.co.uk/black.htm>

The Em on the E locus causes a melanistic mask (muzzle or face). Normally, a Doberman has two normal genes, represented as N/N (N for normal). When there is a mutation it is represented as em/N or em/em. A dog with em/N will be a standard color but be able to pass on the em gene to 50% of its offspring. In Doberman this displays as a dark muzzle and darker black markings on legs and feet. Not every dark muzzle/legs has an Em mutation though! A dog with em/em will be "affected" for the melanistic mask and will pass at least one em gene on to all of its offspring. "Extreme masking can also "hide" tan points.

<http://www.doggenetics.co.uk/masks.html>

Genetically, all dogs simplified have either a solid black coat pigment or red/brown coat pigment (phaeomelanin). A solid black is called eumelanin. "Whether a dog has a solid eumelanin (black) coat or a coat with red/tan markings (caused by phaeomelanin) depends almost entirely on the K locus. K consists of three alleles:

KB - dominant black (solid black, no red). Sometimes referred to as simply K.

kbr - brindle (this is dealt with on the brindle page, but for now all we need to know is that it acts as a k allele, but just adds brindle on top of any red markings).

ky - recessive non-black (will still have black nose pigment and may have black markings, but may also have red markings too). Sometimes referred to as simply k. ...

Because black is dominant, a dog with even just one KB gene will be solid black. A dog with two ky genes (i.e. homozygous for ky) will be able to show tan markings. These tan markings are determined by another locus, A (agouti). So basically, a genotype of ky/ky allows a dog to show whatever it has on the A locus. A Kb/ky or KB/KB dog may be genetically tan-pointed or sable on the A locus, but won't be able to show those markings because of its dominant black allele/s. Dominant black dominates the whole of the A locus, but it can be modified by other genes, such as liver, dilution, greying, and merle. All of these will alter the way a dominant black dog looks, but the one thing they cannot do is add phaeomelanin (red) to the coat. The only way phaeomelanin can be added to the coat of a dog with the dominant black gene is through the e gene (E locus) - recessive red. This turns a dominant black dog (or indeed, any dog) into a solid red dog with black nose pigment. ... Most black dogs have the dominant black gene, but there's also another, less common gene that can cause solid black too - recessive black (a on the A locus)."

<http://www.doggenetics.co.uk/black.htm>

To be recessive black a dog must inherit a/a on the A locus. Appearance is identical to that of Dominant Black. The only difference being Dominant Black only needs one K allele to be solid black.

Picture

- 1) <https://mashable.com/2015/03/05/black-animals-melanism/>
- 2) <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0226136>
- 3) <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0006435>
- 4) <https://www.ncbi.nlm.nih.gov/pubmed/19182816>
- 5) <https://www.pawprintgenetics.com/products/tests/details/163/?breed=114>
- 6) <https://www.nature.com/articles/ncprheum0989>

Melanism is a genetic mutation and not a variation of coat color. Research in 3)mice and 2)cats has proven it to be genetic.

1)Studies on wild melanistic animals has shown that their are healthier and longer lived. The reasoning behind this is they are 2)more difficult to spot thus having a greater chance at survival. A melanistic prey animal is more difficult for a predator to find. A melanistic predator is more difficult to spot making it more successful at hunting. The exact reason to their better health is not well understood but may be linked to lower stress levels and better immune health. 4)Melanism is correlated with better vitamin D synthesis.

Fun Fact: Doberman are one of a few breeds that carry only the tan point allele on the A locus. That means all Doberman are born genetically tan pointed - though this can be overridden by the K Dominant Black or E locus Extreme Masking.

<http://www.doggenetics.co.uk/tan.html>

Melanistic Doberman are not “rare” rather they are just different genes at play. The aim of a breeder is to preserve and to improve the breed. The standard is a guideline, a blueprint for the integrity of the breed. I am of the persuasion to maintain the standard and to focus on the health of the breed. Most studies on melanistic animals are on nocturnal animals (such as cats and mice). Studies into domestic animals such as dogs is limited. To say definitively that melanistic Doberman are healthier than their standard counterparts is misleading. There is limited research into melanistic animals none of which proves melanistic domestic dogs are healthier or longer lived. Seeing how the melanistic Doberman is not part of the established standard and the national breed club (the DPCA) doesn't accept the melanistic as a valid coloration, I do not support the breeding of or for melanistic Doberman. The Em mutation is fairly rare, occurring in a limited gene pool of dogs. Breeding for this mutation is to breed within a small number of lines which is not benefiting the breed. Breeding like that produces dogs with higher COI (inbreeding ratios) and is not aiming to improve the breed, rather it is breeding strictly for color. Until the DPCA accepts melanistic dogs as part of the breed standard they should not be bred. Ethical breeders who sincerely care for the breed and its future will breed to the standard and for the betterment of the breed.

At Jackson's Kennel we do not condone the breeding of melanistic Doberman. We feel strongly about adhering to the breed standard and the 4 accepted coat colors to be preserve the breed.