

## VETERINARY TECHNICAL DATASHEET

Focal Non-Epidermolytic Palmoplantar Keratoderma, (FNEPPK); mutation originally found in Dogue de Bordeaux



Mutation Found In :Dogue de Bordeaux

### Disorder Type

- Skin

### Disease Severity

- Mild/moderate

### Background

Hereditary footpad hyperkeratosis (HFH) is a congenital skin disorder encountered in several breeds – this variant was found to be the causal mutation in the Dogue de Bordeaux and goes by the name focal non-epidermolytic palmoplantar keratoderma (FNEPPK). The disorder is characterized by hard, thickened, and cracked footpads. Unlike a similar condition in other breeds, FNEPPK affected dogs have a normal coat.

### Key Signs

- Hard and cracked footpads
- Severe keratinous proliferations along paw pads (horny protrusions)

### Clinical Description

Focal non-epidermolytic palmoplantar keratoderma is a progressive condition characterized by dry and thickened footpads. The clinical signs include painful cracks and fissures on the footpads that may lead to secondary infections and lameness. Horny protrusions can be observed on all footpads. Affected dogs often avoid walking on rough surfaces. The clinical signs result from abnormal keratinous proliferation of skin cells. However, affected dogs do not exhibit epidermolytic changes and thus have normal nails and lack other cutaneous lesions. Typical onset of clinical signs occurs between 10 weeks and 1 year of age.

### Mode of Inheritance

- autosomal recessive

### Gene Name

- KRT16

### Next Steps

Dogs suffering from FNEPPK have a normal lifespan if the footpads and nails are cared for appropriately. Supportive treatment based on the dog's specific clinical signs is recommended and often involves moisturizing agents.

### References

Plassais J, Guagure E, Lagoutte L, Guillory AS, de Citres CD, Degorce-Rubiales F, Delverdier M, Vaysse A, Quignon P, Bleuart C, Hitte C, Fautrel A, Kaerle C, Bellaud P, Bensignor E, Queney G, Bourrat E, Thomas A, André C. A spontaneous KRT16 mutation in a dog breed: a model for human focal non-epidermolytic palmoplantar keratoderma (FNEPPK). *J Invest Dermatol*. 2015 Apr;135(4):1187-90.