

## **DNA Certificate**

## **Accordant International Pigeon Panel by ISAG**

Certificate issued on March 29, 2019 in Moen, Belgium Certificate updated December 18, 2019

The authenticity and updates of this certificate can be verified on "http://www.pigen.be" This certificate<sup>1</sup> ensures there exists a DNA Profile of pigeon BE15-4076782

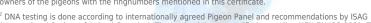


MAR20190251

Scan this QR code to verify this certificate on "http://www.pigen.be"

发送此QR码以在网址 www.pigen.be 上验证此证书

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<ul> <li>This certificate is issued based on tests per and/or FCI officials appointed by the persons</li> </ul>	formed on DNA samples to PiGen by accredited veterinarians that confirmed, on the date of DNA sampling, to be the respe	
owners of the pigeons with the ringnumbers	that confirmed, on the date of DNÁ sampling, to be the respensationed in this certificate.	



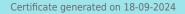
 $<sup>^2</sup>$  DNA testing is done according to internationally agreed Pigeon Panel and recommendations by ISAG (International Society of Animal Genetics). The testing labs are certified according NEN-EN-ISO 9001. The probability of exclusion (PE) of this parentage verification is higher than 99,9%.

<sup>3</sup> The following DNA markers are scientifically associated with racing performance; LDHA is a gene for a lactate dehydrogenase enzyme. DRD4 or dopamine receptor 4 gene is an indicator for character traits. CRY1 or cryptochrome 1 gene codes for a protein in the retina of the eye. Calcium/calmodulin-dependent serine protein kinase (CASK) is a gene important for synapse formation in the harmonic modulin-dependent serine protein kinase (CASK) is a gene important for synapse formation in the

brain and the nerve-muscle connection.

LDL Receptor related Protein 8 (LRP8) is a gene important for the growth of the hippocampus inside the brain. The hippocampus is important for recognition of geographic structures and navigational abilities.

Glutathion-diSulfide-Reductase (GSR) is a protein that is associated with magnetoreception abilities.



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