



## DNA Certificate

### Accordant International Pigeon Panel by ISAG

Certificate issued on July 31, 2013 in Moen, Belgium

Certificate updated April 24, 2017



**JUL20130340**

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

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The authenticity and updates of this certificate can be verified on "<http://www.pigen.be>"  
This certificate<sup>1</sup> ensures parentage authenticity of pigeon BE12-4163422.

BE12-4163422 Blue Ace Freddy'ke
Quality Genes <sup>3</sup> : LDHA: AB Certificate: JUL20130340 <b>Proven by DNA</b>

BE09-5052387 New Freddy	father
Certificate: JUL20130052 <b>Proven by DNA</b>	

	mother

	grandfather

	grandmother

	grandfather

	grandmother

Ruben Lanckriet

Pascal Lanneau

<sup>1</sup> This certificate is issued based on tests performed on DNA samples to PiGen by accredited veterinarians and/or FCI officials appointed by the persons that confirmed, on the date of DNA sampling, to be the respective owners of the pigeons with the ringnumbers mentioned 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 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.

