

REFERENCE NO.: 2026 - 078317/01**OWNER:**

SASCHA WÖHRER

AUF DER HAIDE 5

AT-2304 MANNSDORF AN DER DONAU

AUSTRIA

NAME/LABEL:

ATOMIC

SPECIES: DOG**BREED:** AUSTRALIAN SHEPHERD**SEX:** FEMALE**MICROCHIP NO.:** 250268781539636**TATTOO NO.:** NOT PROVIDED**PEDIGREE NO.:** ÖHZB-NR.: ASH 6183

GENETIC REPORT

SAMPLE: BUCCAL SWAB**SAMPLE TAKEN BY:** HORST WAGNER, DVM TIERARZTPRAXIS DR. HORST WAGNER MAG. THOMAS
KRENDL, STATTERSODORFER HAUPTSTR. 150, 3100 ST. PÖLTEN, AUSTRIA**REQUESTED TEST:** M LOCUS (MERLE)**RESULT:** m/M(267)**COMMENT:**

The test examines presence or absence of *SILV* gene mutation (SINE insertion at the intron 10/ekson 11 boundary) responsible for merle coat color. If the mutation is present the approximate size of M* (merle variant) allele is determined. The size of M* allele correlates to the extent of the observed merle pattern. Longer alleles result in more diluted color. Tested *SILV* gene mutation is inherited in an autosomal incompletely dominant manner. Dogs that inherit two copies of the M* allele of certain size are at an increased risk to be an affected "double merle", which may be prone to a wide range of auditory and ophthalmologic defects. The dog can be merle mosaic (can carry several types of merle alleles). If mosaicism is detected, additional minor alleles are written in square brackets.

Regarding to the presence of tested mutation animals are classified in following genotypes:

- **m/m (non-merle)** - tested dog carries two copies of normal m allele. This dog will pass a copy of m allele to its entire offspring.
- **m/M*** - tested dog carries one copy of normal m allele and one copy of the M* allele; M* allele length will determine the amount of dilute patches. This dog will pass one copy of normal m allele to 50% of its offspring and one copy of M* allele to 50% of its offspring.
- **M*/M*** - tested dog carries two copies of M* alleles; the size of both alleles will determine the variation of the merle coat color/pattern; dogs with two copies of smaller sized alleles display little to no merle pattern, while dogs with one or two copies of large sized alleles are expected to display a distinct dilution/white pattern. This dog will pass one copy of each M* allele variant to 50% of its offspring.
- **m/M*/[M*] or M*/M*/[M*]** - tested dog is a mosaic for tested *SILV* gene and carries an additional M* allele in some cells; the phenotypic impact and inheritance of the additional allele cannot be predicted as cell distribution throughout the body may be variable.

M* - merle variant alleles and their length range: **Mc** - Cryptic Merle (200 to 230 bp); **Mc+** - Cryptic Merle (231 to 246 bp); **Ma** - Atypical Merle (247 to 254 bp); **Ma+** - Atypical Merle (255 to 264 bp); **M** - Merle (265 to 268 bp), classic merle; **Mh** - Herlequon merle (269 to 280 bp)

AUTHORIZED SIGNATURE:

MARIBOR, 11.03.2026

development of the disease. Testing is performed according to the latest scientific knowledge.