



Genorise® Recombinant Canine AMH Protein

Catalog Number: GR122127

Anti-Müllerian hormone (AMH), also known as Müllerian-inhibiting hormone (MIH), is a glycoprotein hormone structurally related to inhibin and activin from the transforming growth factor beta superfamily, whose key roles are in growth differentiation and folliculogenesis. AMH is activated by SOX9 in the Sertoli cells of the male fetus.^[1] Its expression inhibits the development of the female reproductive tract, or Müllerian ducts, in the male embryo, thereby arresting the development of fallopian tubes, uterus, and upper vagina.^[2] AMH expression is critical to sex differentiation at a specific time during fetal development, and appears to be tightly regulated by nuclear receptor SF-1, transcription GATA factors, sex-reversal gene DAX1, and follicle-stimulating hormone (FSH).^{[3][4]} Mutations in both the AMH gene and the type II AMH receptor have been shown to cause the persistence of Müllerian derivatives in males that are otherwise normally masculinized. AMH is also a product of granulosa cells of the preantral and small antral follicles in women. As such, AMH is only present in the ovary until menopause. Production of AMH regulates folliculogenesis by inhibiting recruitment of follicles from the resting pool in order to select for the dominant follicle, after which the production of AMH diminishes.^[5] AMH can also serve as a biomarker for relative size of the ovarian reserve.^[6] In bovine, AMH can be used for selection of females in multi-ovulatory embryo transfer programs by predicting the number of antral follicles developed to ovulation.^[7] AMH can also be used as a marker for ovarian dysfunction, such as in women with polycystic ovary syndrome (PCOS).

References

1. Taguchi O, et al. (1984). *Developmental Biology*. 106 (2): 394–8.
2. Panidis D, et al. (2011). *Medical Hypotheses*. 77 (4): 649–53.
3. Shen WH, et al. (1994) *Cell*. 77 (5): 651–61.
4. Viger RS, et al. (1998). *Development*. 125 (14): 2665–75.
5. Kollmann Z, et al. (2015). *Reproductive Biology and Endocrinology*. 13: 21.
6. Weenen C, et al. (2004). *Molecular Equine Reproduction*. 10 (2): 77–83.
7. Rico C, et al. (2011). *Biology of Reproduction*. 84 (3): 560–71.



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Description

Source: *E. coli* derived

Composition: Ala436-Arg572

Accession # A0A8C0N2S3

N-terminal Sequence Analysis: Ala

Structure/Form: Monomer

Predicted Molecular Mass: 15 kDa

Specifications

SDS-PAGE: 15 kDa, reducing conditions

Endotoxin Level: < 0.1 EU per 1 µg of the protein by the LAL method.

Purity: > 95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation: Lyophilized from a 0.2 µm filtered PBS with BSA as a carrier protein.

Preparation and Storage

Reconstitution: Reconstitute at 50-500 µg/mL in sterile PBS containing 0.1% human or bovine serum albumin.

Shipping: The product is shipped at ambient temperature or in a foam box with ice pads. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage: Use a manual defrost freezer and avoid repeated freeze thaw cycles.

- 6 months from date of receipt, -20 to -70°C as supplied.
- 1 month, -20 to -70°C under sterile conditions after reconstitution.

DECLARATION

THIS REAGENT IS FOR IN VITRO LABORATORY TESTING AND RESEARCH USE ONLY. DO NOT USE IT FOR CLINICAL DIAGNOSTICS. DO NOT USE OR INJECT IT IN HUMANS AND ANIMALS.

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