

Anti-Müllerian Hormone (AMH) (horses)

SAMPLE REQUIRED:
Clotted blood (3.0 mL)

BLOOD TUBE REQUIRED:
Plain (red top) tube

Anti-Müllerian Hormone is a hormone involved in gender differentiation in the developing embryo. In sexually mature animals it is produced by the granulosa cells of ovarian follicles and the Sertoli cells of the testicles.

INDICATIONS

1. For distinguishing between geldings and cryptorchids (rigs)

Measurement of AMH is reliable in males of all ages (unlike the oestrone sulphate test that can only be used in animals over 3 years of age).

2. As a screening test for granulosa cell tumours in mares

Granulosa cell tumours (GCTs) are sex cord-stromal tumours and are the most common form of ovarian neoplasm in mares. Although most GCTs are diagnosed in sexually mature mares, they have also been diagnosed in prepubertal fillies. Most GCTs are unilateral, benign tumors associated with cessation of cyclical reproductive activity. The contralateral ovary is usually small and inactive. Affected mares generally exhibit one of three behavioural patterns: anestrus, continuous or intermittent estrus (i.e., nymphomania), or stallion-like behaviour, depending on the type of neoplastic cell involved and the type of hormone produced (if any).

Assessment of AMH concentration has been shown to be more sensitive for detection of GCTs than testosterone and inhibin testing. Ball et al. (2012) found a diagnostic accuracy of 95 % for AMH in mares with GCTs compared with inhibin (85 %) and testosterone (54 %). Unlike testosterone and inhibin, AMH is not influenced by the estrus cycle and pregnancy.

COLLECTION PROTOCOL

- The sample should be collected early in the week to ensure that it is received at the laboratory by Wednesday. Samples should reach the laboratory within 2 days of collection as AMH concentrations gradually increase with sample aging.
- Collect 3 mL of blood into a plain (red top) tube.
- Allow the sample to clot for 30 minutes at room temperature, and then refrigerate until courier collection.