ACT-VETube ad us. vet.

Activated Clotting Time (ACT) – standardised in-clinic coagulation diagnostics

Standardised screening test for determination of secondary hemostatic disorders in the dog, cat and horse

Emergency diagnostics
- bleedings of unknown origin
- suspicion of rodenticide and other intoxication
- suspicion of DIC (disseminated intravascular coagulation) during shock, trauma, tumor etc.

Therapeutic monitoring during vitamin K or heparin medication etc.

Pre-surgery screening test

Haemophilia A & B screening test in “bleeding races”, e.g. Rhodesian Ridgeback or Havanese

- Simple standardised test procedure
- Fast test interpretation after few minutes
- Reliable clinical diagnostics
- Storage at room temperature (15-25°C)
- Long shelf life
- Compact test box with 10 tests
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Hemostasis is a complex physiological reaction to all kinds of bleedings. Hemostatic disorders base on defects or causes of the primary (cellular hemostasis via thrombocytes) and secondary (plasmatic clotting factors) hemostasis.

The Activated Clotting Time (ACT) is, like the activated Partial Thromboplastin Time (aPTT), an important coagulation marker for screening of the individual status of hemostasis, especially of the intrinsic and common path of the coagulation cascade.

With ACT, suspicion of secondary hemostasis disorder can be confirmed quickly and easily on-site. Prolonged ACT occurs in the dog and cat during internal bleedings in body cavities, by genetically inherited factor deficiencies like hemophilia A and B as well as by acquired causes like rodenticide intoxication, liver diseases, administration of drugs like coumarin or heparin and lack of vitamin K. In the horse, prolonged ACT occurs especially in hemostatic disorders connected with DIC (disseminated intravascular coagulation: shock, colic, laminitis, thromboses etc.).

Being fast, simple and reliable, ACT-VETube enables the veterinarian to measure the time (in seconds) needed by a blood sample mixed with diatomaceous earth at 37 °C to show first signs of blood clots.

**Test procedure**

1. Warm up the ACT-VETube tube to ca. 37 °C
2. Add 2.0 ml native blood from V. jugularis into the hand-hot ACT-VETube tube
3. Close ACT-VETube tube and mix by careful swinging for one time
4. Swing the tube from horizontal to vertical every 10 seconds and watch for potential coagulation
5. When first blood clots are visible, stop the stop-watch and read coagulation time (ACT)

**Test interpretation**

1. **Standard ACT**
   - Dog: 60-110 seconds
   - Cat: 50-75 seconds
   - Horse: 130-200 seconds

2. **Prolonged ACT**
   - DIC (Disseminated Intravascular Coagulation: Infections, shock, colic, laminitis, etc.)
   - advanced rodenticide or fungal poisoning, snake bite
   - severe thrombocytopenia (< 10,000 /µl blood)
   - diverse thrombocytopathies
   - inhibitors preventing clot formation (heparin, coumarin, uraemia, a. s. o.)
   - severe factor deficiencies (sensitivity < than aPTT!)
     - intrinsic or common (XII, XI, IX, VIII, X, V, II, I)
3. **Therapy monitoring via ACT**
   - Heparin, marcumar or warfarin therapy (podotrochlosis, thrombophlebitis, DIC etc.)
   - Vitamin K therapy (coumarin poisoning)

For evaluation of additional suspicion on malfunction of primary haemostasis, the use of SURGICUT® Vet K or H, respectively, is recommended (determination of the Buccal Mucosal Bleeding Time = BMBT).

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