

Resource Summary Report

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Collection of brain stem for post-mortem diagnosis of rabies in animals by the LN34 pan-lyssavirus real-time RT-PCR assay

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Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.n4sdgwe>

Authors: Crystal M. Gigante, Rene Edgar Condori, Lillian Orciari, Todd G. Smith, Yu Li

Summary: Patterns of rabies virus spread within the central nervous system suggest that a thorough examination of the brain stem is critical for rabies diagnosis. Viral RNA is widespread in the brain of most animals positive for rabies. However, because virus spread may be unilateral, especially in larger animals, a negative finding for rabies can be made only if a complete cross section of the brain stem is examined. Examination may be made at the level of the pons, medulla, or midbrain of the brain stem. While a negative finding for rabies can be made only if a full cross section of brain stem tissue is examined, incomplete or suboptimal specimens should be tested, if possible. Identification of rabies virus RNA in any tissue is diagnostic of rabies infection [1, 2]. Examples of samples that may be tested for rabies virus RNA to rule-in (but not rule-out) rabies infection are hippocampus, cerebellum, cortex, saliva, and nuchal skin biopsy.

Associated Publications:

Gigante CM, Dettinger L, Powell JW, Seiders M, Condori REC, Griesser R, et al. (2018) Multi-site evaluation of the LN34 pan-lyssavirus real-time RT-PCR assay for post-mortem rabies diagnostics. PLoS ONE 13(5): e0197074.
<https://doi.org/10.1371/journal.pone.0197074>

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