

# Evaluation of Various Analytical Methods for Quantification of Rabies Antigen

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**Abstract:** *Background: Rabies is a zoonotic viral disease caused by rabies virus. Rabies virus has special inclination towards central nervous system (CNS) where it causes life threatening acute encephalitis. Perhaps being extremely fatal, rabies can be 100% prevented by early, effective and complete post exposure prophylaxis (PEP). PEP for rabies include immediate toileting of bite wound, administration of rabies immunoglobulins (severe exposures), and a full course of anti-rabies vaccination (ARV). As ensuring the absence of any variations in the primary nucleotide sequence of the viral backbone after successive propagation in human cell lines is crucial to ensure that the expression vector does not produce variants of the antigen during production of vaccine, the present study was conducted with an aim to evaluate various analytical methods for quantification of rabies antigen.*

*Method: Various analytical methods the Western Blot technique, the Sodium Dodecyl Sulphate Agarose Gel Electrophoresis(SDS-PAGE), ELLA method, the Enzyme-linked immunosorbent assay (ELISA) and extinction coefficient were used for quantification of rabies antigen.*

*Results: When results of these tests were analyzed, it was observed that these analytical methods are easy, cost effective, accurate and most importantly rapid for quantification of rabies antigen.*

*Conclusion: On the basis of observations noted in this study, Western Blot technique, the Sodium Dodecyl Sulphate Agarose Gel Electrophoresis(SDS-PAGE), ELLA method, the Enzyme-linked immunosorbent assay (ELISA) and extinction coefficient can be reliably recommended as analytical methods for quantification of rabies antigen..*

**Keywords:** Rabies, rabies antigen, quantification, immunological tests, ELISA, ELLA, SDS PAGE

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