

## Improved Dot ELISA Technique for Diagnosis of Some Tissue Parasite Infecting Donkeys

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**Abstract:** After fractionation of fertile *Hydatid* cyst fluid antigens (FHCFAg) and *Sarcocystis* sp. bradyzoites antigens (SBAg), The bands at MW of 38 KDa, 36 KDa and 33-29 KDa were reacted specifically versus sera of *Hydatid* cysts (HC) infected donkeys as well as Sera of FHCFAg vaccinated rabbit hyper-immune sera (RHIS) using enzyme linked immuno-transfer blot (EITB) technique. By the same way, the bands at the level of 63 KDa, 49 KDa, 36 KDa and 30 KDa in the fractionated SBAg were proved as specific bands versus sera of *Sarcocystis* sp. natural infected donkey and SB Ag vaccinated RHIS. Testing the value of these fractions in diagnosis of HC infections using dote ELISA revealed that all of the above bands proved absolute (100%) sensitivity versus the dotted infected donkey sera as well as RHIS. The degree of color darkness was high for the fraction of 38 KDa versus all of the tested sera. In the same time all of SBAg EITB specific fractions proved absolute sensitivity (100%) in capturing of their specific Ab from sera of *Sarcocystis* sp. natural infected donkeys as well as in RHIS, by the same level of darkness. None of these fractions reacted versus control non infected donkey or rabbit sera using dot-ELISA. In FHCFAg, fraction of 38 KDa appear highly specific (100%) with high validity % versus sera of *Sarcocystis* sp., *Fasciola* and *Rhinoestrus* infected donkeys. By the same way, SB Ag fractions showing specificity 80% versus sera of HC and *Fasciola* infected donkeys. But they showing absolute specificity (100%) versus *Rhinoesterus* infected sera with validity % reached to 93.3% using dot-ELISA technique. Same results were obtained in comparing the data of HC infection obtained after P.M inspection with that obtained via detection of the parasite Ab in their sera using this modified Dot-ELISA technique in pre-scarified group of donkeys. Dotting of serum samples on previously identified specific protein fractions introduce easily applicable diagnostic technique take the advantage of EITB technique and ELISA.

**Key words:** Dot-ELISA, donkeys, EITB, *Hydatid* cyst, *Sarcocystis* sp.