HUMAN DIAGNOSTIC Western Blot KITS FOR PARASITOLOGY and MYCOLOGY

3 FORMATS: 12, 24, 96 tests

Scientific references

Reliable
Ready for use
Common reagents
Common procedure

PRESENTATION  page 1
TOXOPLASMA IgG  page 2
TOXOCARA IgG  page 3
LEISHMANIA IgG  page 4
ECHINOCOCCUS IgG  page 5
CYSTICERCOSIS IgG  page 6
TRICHINELLA IgG  page 7
SCHISTOSOMA IgG  page 8
FASCIOLA IgG  page 9
Congenital TOXOPLASMOSIS (IgG-IgM)  page 10
ASPERGILLUS IgG  page 11

New!
Founded 15 years ago, LDBIO DIAGNOSTICS is specialized in R&D, Manufacturing and Marketing of in vitro diagnostic (IVD) tests for human infectious diseases.

We manufacture confirmatory tests in Serology by Western Blot using a natural antigen for Parasitology and Mycology. Our list of products also includes a Toxoplasma Western Blot (WB) for the specialized diagnosis of congenital toxoplasmosis at birth.

Our kits are today used worldwide in University Hospitals and Reference Laboratories for the confirmation of positive or doubtful screening results.

The strategy of the company involves an especially strong relationship with our partners and our customers, an acute attention to quality and performance of our products for the best diagnosis.

LDBIO DIAGNOSTICS is certified EN NF ISO 13485 (2004), ISO 9001 (2008), and our IVD products all are CE marked.

Specific, sensitive and standardized for checking equivocal, borderline or not interpretable results from IgG serological screening tests. LDBIO-TOXO II IgG is correlated with the Sabin-Feldman dye test (J. Clin. Microbiol. 2008 Jul;46(7):2334-8)
Discrepancies between a new Toxoplasma gondii highly-sensitive Elisa assay and other reagents: Interest of Toxo IgG Western Blot

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Immunodiagnostic assays are commonly used to screen for maternal toxoplasmonic seroconversion during pregnancy. The introduction on the market of a new highly-sensitive IgG assay, the Elecsys toxo IgG test, has resulted in discrepancy issues with other immunoassays. Western blot appears to be a good alternative gold standard to the dye test, as the latter is not routinely available. For the present prospective study, we compared the analytical performances of two immunoassays, Elecsys Toxoplasma IgG (Roche diagnostics) and Platelia Toxo IgG (BioRad), to Toxo II IgG Western blot (LDBio) using 231 consecutive sera with low or equivocal IgG titres. 213/231 sera presented discrepancies from which showed the importance of a confirmation test. 100% of the two immunoassays IgG positive results were confirmed by the Western blot with a positive threshold of 30 IU/ml for Elecsys; in the equivocal area (1-30 IU/ml) western blot is negative in 54% of cases. Our results suggest that the lower diagnostic cut-off of Platelia Toxo IgG should be further reduced. Our study indirectly confirms that monitoring, especially for pregnant women, must be done in the same laboratory using the same technique. The ability to diagnose very early seroconversion using Western blot merits further study.

More scientific references


Cutaneous manifestations of human toxocariasis

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Human toxocariasis is a parasitic disease characterized by the presence of larvae of the genus Toxocara in human tissues. T canis and T cati, the adult roundworms of which are found in dog and cat intestines, respectively, are the most common causative agents of the disease. Toxocarial larvae usually cause two severe syndromes: visceral larva migrans and ocular larva migrans, depending on the location of the larvae. Two other syndromes, covert toxocariasis and common toxocariasis, which are less typical and not as severe, have also been described. During the last two decades, cutaneous manifestations such as chronic urticaria, chronic pruritus, and miscellaneous eczema, in patients with Toxocara antibodies, have been studied by different authors. In some cases, these cutaneous manifestations are the only signs indicating the presence of the disease, and they are cured after antihelmintic treatment when there is good patient compliance. In this review, we focus on these particular skin manifestations regarding their clinical description, diagnosis, and treatment.

More scientific references


Leishmania infantum mucosally restricted leishmaniasis was rarely reported, so that diagnostic and treatment strategies remain debated. A long-term multicentric survey appeared thereby necessary.

METHODS: Cases were prospectively collected over 12 years in 3 academic hospitals of Southern France. Predisposing factors, clinical findings, diagnostic procedures, treatment and outcome were compared to medical literature.

RESULTS: Ten new cases and 40 historical reports were collected. Respectively 10/10 and 35/40 patients were adult males. Immunodeficiency was frequent (5/10 and 18/40). No previous cutaneous lesion was reported. Leishmaniasis affected mostly larynx (5/10 and 19/40), but also mouth (2/10 and 19/40) and nose (3/10 and 5/40). Lesions were highly polymorph. Mucosa histological examination provided respectively 1/10 and 2/40 false negative results, contrary to serum immunoblotting and PCR on mucosal biopsy. Although local response was always satisfactory even using topical treatment, subsequent visceral spreading was observed in 2/10 and 1/40 cases.

CONCLUSION: L. infantum mucosally restricted leishmaniasis exhibits a specific pattern, marked by tropism for adult males, high clinical and histological polymorphism. Immunoblot screening and PCR confirmation of suspected lesions are necessary because of direct examination occasional false negative results. The risk of visceral spreading sustains systemic therapy.

SUMMARY: Leishmania infantum mucosal leishmaniasis mostly affects adult males, half of them immunodeficient. Clinical and histological polymorphism makes the diagnosis difficult, stressing the need for immunoblot screening and mucosa PCR analysis of suspected cases. Possible visceralization sustains systemic therapy.

More scientific references


Serological confirmatory testing of alveolar and cystic echinococcosis in clinical practice: results of a comparative study with commercialized and in-house assays

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Sera of 50 patients with either cystic (CE) or alveolar echinococcosis (AE) in different clinical stages were examined for the presence of anti-Echinococcus-antibodies. Antibody-screening was performed with ELISA, IHA and IFAT, and confirmatory testing was done by the commercialized E. multilocularis-specific Em2plus-ELISA versus an in-house E. multilocularis-specific Em10-ELISA. Sera with discrepant confirmatory results were subjected to a commercial Echinococcus IgG Western blot (WB). In sera from patients with CE, the Em2plus-ELISA showed cross-reactions in 23.5%, whereas the Em10-ELISA did not exhibit any cross-reactivity. Cross-reactivity paralleled active infection with high antibody titers in the screening assays. In sera from patients with AE, confirmation by both ELISAs was achieved in 57.6%, mostly in patients with an advanced stage of the disease and high antibody titers in the screening assays. False-negative reactions of both ELISAs occurred in 30.3%, mostly in patients who had low antibody levels in the screening tests. The Em2plus-ELISA exhibited fewer false-negative reactions than the Em10-ELISA. The WB confirmed the positive results of either assay and was the assay with the highest reliability at different stages of CE and AE, followed by the Em2plus-ELISA for AE. High antibody titers in the screening assays will favour the detection of species-specific antibodies in either form.

More scientific references

Bart, Jean-Mathieu, Martine Piarroux, Yasuhiro Sako, Frédéric Grenouillet, Solange Bresson-Hadni, Renaud Piarroux, et Akira Ito. « Comparison of several commercial serologic kits and Em18 serology for detection of human alveolar echinococcosis ». Diagnostic microbiology and infectious disease 59, no. 1 (septembre 2007): 93-95.


Human neurocysticercosis: comparison of different diagnostic tests using cerebrospinal fluid

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Neurocysticercosis (NC), caused by the larval stage of Taenia solium, is one of the most common parasitic diseases of the central nervous system. The diagnosis of NC is mostly based on costly brain neuroimaging (computed tomography and/or nuclear magnetic resonance), which is rarely accessible in most affected areas. The most sensitive and specific tools for NC diagnosis are imagery techniques. The identification of specific antibodies and antigens is currently used only to support NC diagnosis due to their limited specificity and sensitivity. This study was performed to compare immunodiagnostic assays (antibody detection by enzyme-linked immunosorbent assay [ELISA] and enzyme-linked immunoelectrotransfer blotting [EITB] and HP10 antigen detection by ELISA) with the detection of parasite DNA by PCR amplification of a repetitive element of the parasite genome in the cerebrospinal fluid (CSF) of 121 radiologically and clinically characterized NC patients. Patients were divided into six groups according to the stage of the parasites and their localization. The CSF cellularity of each patient was also recorded. When all patients were considered, PCR exhibited the highest sensitivity (95.9%) and variable specificity (80% or 100%) depending on the controls used. The sensitivities of antibody detection by ELISA and EITB were not significantly different, and ELISA identified HP10 antigen mostly when vesicular cysticerci were located in the subarachnoid basal cisterns. These results can help in the selection of different individual assays or combinations of assays to be used in NC diagnosis according to different requirements.

More scientific references


We evaluated industrially prepared Western blot strips designed to avoid the cross-reactions observed with indirect immunofluorescence and enzyme-linked immunosorbent assays used for the serodiagnosis of trichinellosis. The antigen preparations were crude extracts of Trichinella spiralis. The Western blot profile characteristic of trichinellosis was characterized by comparing 60 sera from patients infected by Trichinella to 11 sera from healthy subjects, 51 sera from patients with other proven parasitic diseases (cysticercosis, schistosomiasis, strongyloidosis, fascioliasis, toxocariasis, liver amebiasis, anisakiasis, filariasis, toxoplasmosis, hydatidosis, or malaria), and 23 sera from patients with autoantibodies. Specific 43- to 44-kDa and 64-kDa bands were obtained with all of the sera from 51 patients with acute trichinellosis, in 4 out of 9 patients at the early stages of the disease, and in only 1 control patient, who had suspected anisakiasis and in whom trichinellosis could not be ruled out by muscle biopsy.

More scientific references

The Schistosoma IgG WB kit is a high sensitive and specific Western Blot IVD test which provides the confirmation of Schistosoma IgG antibodies

Development and Evaluation of a Western Blot Kit for Diagnosis of Schistosomiasis

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We evaluated the performance of Western blot (WB) analysis using commercially available antigen strips and compared the results with those of indirect hemagglutination (IHA) and indirect immunofluorescence (IFAT) for the serodiagnosis of human schistosomiasis. The antigen preparation was a crude extract of Schistosoma mansoni. The WB profile characteristics of schistosomiasis were characterized by comparing the results for 58 serum samples from patients with parasitologically proven S. mansoni (n = 12) and S. haematobium (n = 46) infections and 37 individuals with probable cases of schistosomiasis but with only positive serology results. The specificity of WB analysis was assessed by testing 12 serum samples from healthy subjects, 67 serum samples from patients with other proven helminthic and protozoan infections, and 16 serum samples from patients with autoantibodies. Six immunodominant bands (65, 70, 80, 95, 110, and 120 kDa) were revealed with sera from patients with schistosomiasis. The presence of three or more bands in the range 65 to 120 kDa, with the exception of the 100-kDa band, was considered diagnostic for Schistosoma infection and had a specificity of 100% in our series. In patients with proven schistosomiasis, the sensitivity of WB analysis was 84.5%, whereas those of IFAT and IHA were 65.5 and 72.9%, respectively. For serologically proven cases, the sensitivity of WB analysis was 97.3%. The overall sensitivity and specificity for both groups of patients were 89.5 and 100%, respectively, with positive and negative predictive values of 100 and 91.3%, respectively. We conclude that WB analysis is a useful technique for the immunological diagnosis of schistosomiasis.
Cross-sectional serological survey of human fascioliasis in Haiti

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J Parasitol Res. 2012;2012:751951

Fasciola hepatica, the aetiological agent of fascioliasis in the Caribbean region, occurs throughout the major islands of the Greater Antilles and in localised zones on two islands (Martinique and Saint Lucia) of the Lesser Antilles. However, apart from Puerto Rico, information regarding human fascioliasis in islands of the Caribbean is out of date or unavailable, or even nonexistent as in Haiti. The authors conducted a retrospective, cross-sectional serological survey in Port-au-Prince using a Western blotting test (LDBIO Diagnostics) on human fascioliasis in Haiti. A total of 216 serum samples obtained from apparently healthy adults were tested. The frequency of antibodies in serum samples of the study population was 6.5% (14/216). The immunodominant bands recognised in Western blots were 27-28 kDa (100%), 42 kDa (64%), 60 kDa, and 8-9 kDa (28%). This is the first survey to reveal a relatively low proportion of asymptomatic F. hepatica-infected humans in Haiti.
Comparison of Mother and Child Antibodies That Target High-Molecular-Mass Toxoplasma gondii Antigens by Immunoblotting Improves Neonatal Diagnosis of Congenital Toxoplasmosis

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This retrospective study proposes a new reading of immunoblotting (IB) in the diagnosis of congenital toxoplasmosis. Our findings demonstrate that a three-IgM-band association at 75, 90, and 100 kDa called the IgM triplet increases the sensitivity to 95.8% when combined with prenatal and serological neonatal tests.

More scientific references


Sensini, A. « Toxoplasma gondii infection in pregnancy: opportunities and pitfalls of serological diagnosis ». Clinical microbiology and infection: the official publication of the European Society of Clinical Microbiology and Infectious Diseases 12, no. 6 (juin 2006): 504-512.


The Aspergillus IgG WB kit is a high sensitive and specific Western Blot IVD test which provides the confirmation of Aspergillus IgG antibodies. We showed a better correlation with clinical features than IPD.

ASPERGILLUS IMMUNOBLOT: A NEW DIAGNOSTIC TOOL

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Submitted to ECCMID, Berlin, 2013, April 27th - April 30th

Objectives : Specific antibodies detection is key to diagnose aspergillosis in immunocompetent patients. Although not standardized, immunoprecipitin detection (IPD) is the current gold standard. The aim of this study was to evaluate the utility of a new commercial immunoblot (WB) kit (Aspergillus WB IgG - LDBio Diagnostics, Lyon, France) as a diagnostic tool for chronic aspergillosis.

Methods : Sera from two groups of patients with proven, suspected or possible chronic aspergillosis (group 1) and cystic fibrosis patients with either allergic bronchopulmonary aspergillosis or Aspergillus colonization (group 2) were collected in the Parasitology and Mycology Laboratories of four French University Hospitals (Grenoble, Marseille, Saint Etienne and Saint Antoine, Paris). Blood donors’ sera (group 3) were used as healthy controls. Excepted for group 3, IPD has been performed in each laboratory as part of the patients’ routine diagnostic work-up. WB was performed on all sera using the Aspergillus WB IgG kit (LDBio Diagnostics, Lyon, France) according to the manufacturer’s recommendations.

Preliminary Results : To date, 249 sera from aspergillosis cases (respectively 176 and 73 sera for group 1 and 2) and 213 healthy control sera were analyzed. 99% of the positive sera displayed at least a three specific bands WB pattern, as described in Aspergillus WB IgG kit. WB specificity, as calculated over group 3, was at 96%. Sensitivity ranged from 67% to 100%, depending on the patients’ diagnosis. It increased with aspergillosis categorization level; i.e., for group 1, the Aspergillus WB gave the best results in proven aspergillosis cases (Table 1). Overall, the results showed that the WB was at least as sensitive as the currently used IPD assays (Table 1). Finally, it was notified that the use and the interpretation were easier for WB than for IPD.

Conclusion : These promising preliminary results highlight the interest of this novel immunoblot assay for the diagnosis of aspergillosis in immunocompetent patients. Further studies are warranted to confirm its performance.

For any questions, contact us at : contact@LDBdiagnostics.com

or visit our website : http://www.LDBdiagnostics.com