Product No. A 1054
Lot 087H4843

Monoclonal Anti-Digoxin Alkaline Phosphatase Conjugate

Ig Fraction of Mouse Ascites Fluid
Clone DI-22

Monoclonal Anti-Digoxin (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with digoxin-KLH. The isotype is determined using Sigma ImmunoType™ Kit (Sigma Stock No. ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma Stock No. ISO-2). The immunoglobulin fraction of the ascites fluid is conjugated to Alkaline Phosphatase using 0.2% glutaraldehyde.
The conjugate is provided as a liquid in 0.05 M Tris buffer, pH 8.0, containing 1% BSA, 50% glycerol, with 1 mM $MgCl_2$ and 0.1% sodium azide (see MSDS)* as a preservative.

Specificity

Alkaline Phosphatase Conjugated Monoclonal Anti-Digoxin is specific for digoxin and digoxin-labeled compounds. The DI-22 clone shows strong cross-reactivity with digoxigenin.

Uses

Alkaline Phosphatase Conjugated Monoclonal Anti-Digoxin may be used to detect digoxin-labeled compounds such as oligonucleotides, antibodies or peptides. Labeled compounds and corresponding conjugated antibodies can be used for the detection of viruses and bacterial infections in human diagnostics, oncogenes as tumor markers, histocompatibility antigens in transplantation analytics causative research (e.g., in autoimmune diseases), characterization of lymphoid cell subpopulations (e.g., during treatment of lymphomas), determination of genetic defects or genetic defect predispositions (e.g., Alzheimer's disease), and nucleic acid diagnostics.

Titers

1. ELISA (direct): Titer is defined as the dilution of conjugate sufficient to give a change in absorbance of 1.0 at 405 nm after 30 minutes of substrate conversion at 25°C (Voller, et al.[1]).

   a. 1:7,000
   Microtiter plates are coated with purified digoxin-BSA at a concentration of 50 µg/ml in 0.05 M carbonate/bicarbonate buffer, pH 9.6 (Carbonate/Bicarbonate Buffer Capsules are available as Sigma Product No. C 3041).
   b. 1:5,000
   Microtiter plates are coated with purified digoxigenin-transferrin at a concentration of 20 µg/ml in 0.05 M carbonate/bicarbonate buffer, pH 9.6 (Carbonate/Bicarbonate Buffer Capsules are available as Sigma Product No. C 3041).

Substrate: *p*-Nitrophenyl phosphate (pNPP, Sigma Product No. N 2765), 1.0 mg/ml in 10% diethanolamine buffer, pH 9.8, containing 0.5 mM $MgCl_2$.

2. Dot Blot

   a. A dilution of 1:20,000 was determined in a direct assay using digoxin-BSA or digoxigenin-transferrin (1-2 µg/dot). No reaction versus BSA or transferrin.
   b. A dilution of 1:20,000 was determined in a direct chemiluminescent assay using digoxin-BSA or digoxigenin-transferrin (1-2 µg/dot). Substrate: 1,2 -Dioxetane and enhancer was used as substrate.

Working dilutions should be determined by titration assay. Due to differences in assay systems, these titers may not reflect the user's actual working dilution.

Storage

Store at 2-8°C. **Do Not Freeze**.
Working dilution should be discarded if unused within 12 hours.

* Due to the sodium azide content a material data safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

References

1. Voller, A., et al., Bulletin WHO, **53**, 55 (1976).
2. Kessler, C., Molecular and Cellular Probes, **5**, 161 (1991).
3. Kehayov, I.R., et al., Hybridoma, **9**, 493 (1990).