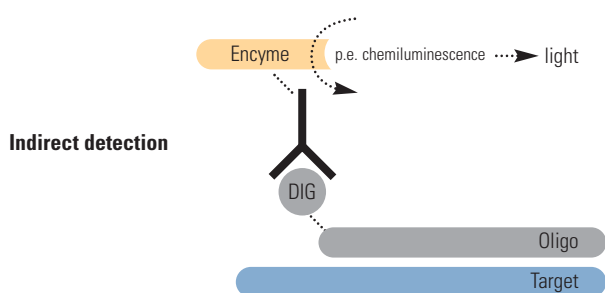
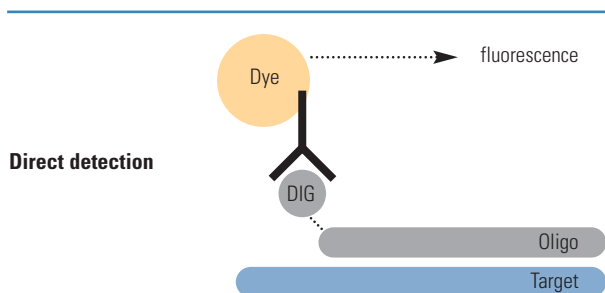


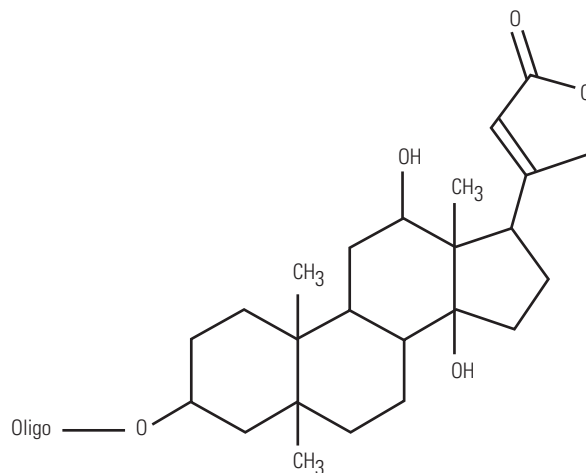
Digoxigenin (DIG) Modification

Description

Digoxigenin is a steroid extracted from the plant *Digitalis purpurea* and *Digitalis lanata*. Digoxigenin modified oligonucleotides are widely used as high sensitivity probes for non-radioactive immunoassays and hybridization experiments. These DIG-probes are monitored by anti-DIG antibodies. These antibodies only show cross-reactivity with blossoms and leaves of *D. spec* (sole natural sources for DIG) – so they are suitable for analysis of any other biological species. Anti-DIG antibodies are either modified with fluorescent dyes (direct detection) or with an enzyme (indirect detection via enzyme-substrate reaction)



Chemical structure of DIG oligonucleotide



Advantages

- highly sensitive assays without the disadvantage of radioactive labelling
- very low background in biological assays (sole cross-reactivity to *D. purpurea*)
- combined assays possible (simultaneous analysis of DIG/anti-DIG and biotin/(strept)avidin assays)

Applications

- fluorescence in-situ hybridization (FISH)
- non-radioactive immunoassays
- cytochemical staining / immunohistochemistry
- detection of specific DNA or RNA by hybridization, (i.e. Southern or Northern Blotting)

Product offering

5' or 3' DIG modifications are available at all standard scales from 0.02 μmol up to 10 mg.

Easy order via web: www.thermo.com/oligoorder or via email: sales.oligos@thermo.com

Literature

1. Holtke HJ, Ankenbauer W, Muhlegger K, Rein R, Sagner G, Seibl R, Walter T. (1995)
The digoxigenin (DIG) system for non-radioactive labelling and detection of nucleic acids – an overview. *Cell Mol Biol.* 41(7):883-905.
2. Roche Applied Science (2002)
DIG Application Manual for Nonradioactive *In Situ* Hybridization (3rd edition)
3. Moter A, Göbel UB (2000)
Fluorescence *in situ* hybridisation (FISH) for direct visualization of microorganism, *J Microbiol Meth.* 41: 85-112

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