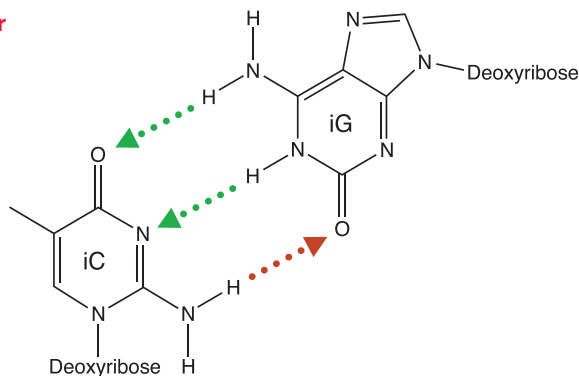


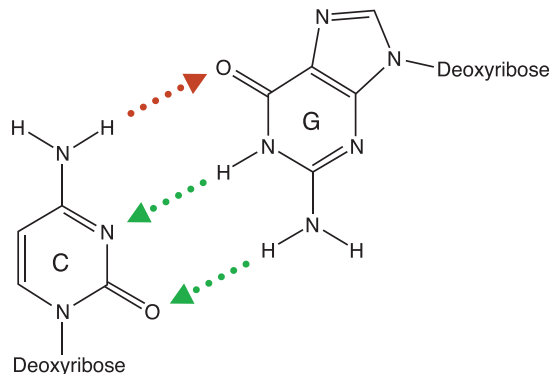
MultiCode® Technology

MultiCode products from Luminex offer a flexible platform for both real-time and multiplex PCR-based assays. MultiCode products are based upon the unique patented MultiCode bases, isoC and isoG. The synthetic isoC:isoG DNA base pair differs from the naturally occurring base pair in its hydrogen bonding pattern. As a result, the MultiCode bases, isoC and isoG, can only base pair with each other. This property enables site-specific incorporation of the isobases during amplification.

MultiCode® Base Pair



Standard Base Pair



The isoC (iC) and isoG (iG) MultiCode bases form the building blocks for Luminex's next generation MultiCode assays for nucleic acid-based testing. MultiCode-based PCR assays are used for the early detection of infectious diseases and genetic-based conditions.

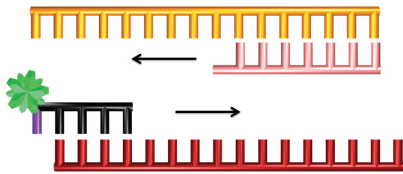
MultiCode-RTx Technology

The superior molecular recognition between MultiCode bases is utilized in MultiCode-RTx technology, a probe-free real-time PCR system that enables detection and/or quantification of nucleic acid-based targets.

MultiCode-RTx technology can support single tube multiplex reactions and utilize controls to monitor the reaction. MultiCode-RTx primers are designed to include a fluorescent reporter in close proximity to an isoC base on the 5' end. isoG covalently attached to a quencher is present in the reaction mix and is incorporated opposite to the isoC during the amplification reaction. Site-specific interaction of the reporter-labeled isoC with the quencher-labeled isoG during amplification produces a decrease in fluorescence. Reporter quenching is reversible and can therefore be used to confirm the presence of target through melting curves.

Unique Features:

- **Rapid Results:** our novel chemistry can streamline assay workflow—reducing turnaround time in the laboratory
- **Easy to Implement:** Standardized reagents simplify implementation
- **Versatile Reagents:** Compatible with most real-time PCR instrumentation
- **Confidence in Results:** Melting curves allow confirmation of target amplification and detection of multiple analytes
- **Reliable Detection:** Amplification and sample processing controls enable monitoring samples from extraction to amplification



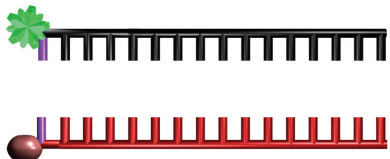
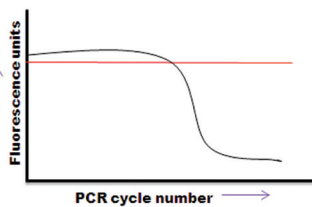
Step 1: Primer Annealing & Extension

The reporter-labeled forward primer containing a single isoC on the 5' end and unlabeled reverse primer hybridize to the target nucleic acid. During the amplification process, the labeled primer is incorporated into the newly synthesized strand and serves as template for the reverse primer in the next cycle.



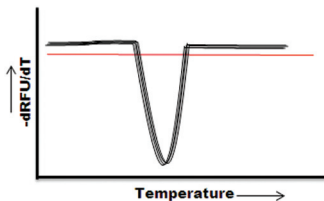
Step 2: Site Specific isoG Incorporation

Synthesis of the opposite strand terminates with the incorporation of an isoG with a covalently attached quencher molecule. The resulting proximity of the quencher to the reporter produces a decrease in fluorescence. The fluorescence decrease is directly proportional to the amount of amplicon



Step 3: Thermal Melt

Following the completion of amplification, a thermal melt is performed and fluorescence is restored after the strands separate.



Fluorescence is monitored on commonly available real-time thermal cyclers. Process controls may be utilized to monitor extraction and amplification. The Luminex MultiCode-RTx Analysis Software* allows the user to import raw data generated from different real-time instruments. The software also features the ability to automatically graph standard curves, perform quantitative calculations and generate custom reports.

*For Laboratory Use Only

For more information about MultiCode Technology and products, contact Luminex Madison Customer Support toll free at 866-327-3290 or visit: www.luminexcorp.com/MultiCode

Products are region specific.

Please contact us at support-eragen@luminexcorp.com to obtain the appropriate product information for your country of residence.

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HEADQUARTERS

12212 Technology Blvd
Austin, TX 78727 USA

Tel: 512.219.8020
Fax: 512.219.5195

www.luminexcorp.com
info@luminexcorp.com

CANADA

Tel: +1.416.593.4323
Fax: +1.416.593.1066

EUROPE

Tel: +31.162.408333
Fax: +31.162.408337

CHINA

Tel: +86.21.616.50809
Fax: +86.21.616.50811

JAPAN

Tel: +81.3.5545.7440
Fax: +81.3.5545.0451

AUSTRALIA

Tel: +61.7.3273.0273
Fax: +61.7.3273.0274

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