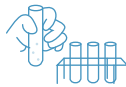


Method Comparison

Method	NGS	MLPA P034+P035	Origin
Copy Number (Account for 80%)	Yes	Gold standard	Gold standard
Indel (Account for 10%)	Yes	-	Yes
Point Mutation (Account for 10%)	Yes	-	-
Operation	Multiple reaction	Multiple reaction	Single reaction
Duration	7~14 Days	2 Days	3 Hours
Cost	High	Medium	Low
Drawbacks	-Carrier missed -Poor repeatability -FN/FP Risk -Batching required	Poor repeatability	-
Application	Patient Screening	Patient Diagnosis	Carrier screening Patient Diagnosis

Workflow



Fluorescent PCR



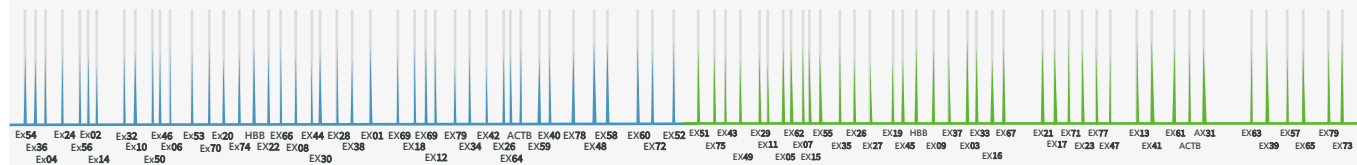
Capillary electrophoresis



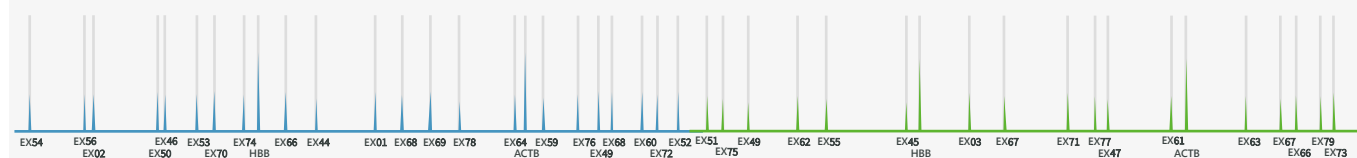
Result analysis

Result Display

Normal Female



Exon 4-43 deletion



Advantages



Comprehensive Detection

World's first single-tube assay covering all DMD exons



High Accuracy

Dual internal controls precisely distinguish 0 -3 CNs



Easy Operation

Single amplification, direct CE run, results within 3 hours



Superior to Gold Standard

Benchmarked to gold standard with faster, streamlined workflow



Automated interpretation

Automated analysis software minimizes human error

Origin Biotechnology Co., Ltd

SF.-1, No.12, Linsen S. Rd., Zhongzheng Dist., Taipei



PCR-CE DMD Kit



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Answers for better life

Duchenne Muscular Dystrophy

DMD is the most common progressive muscular dystrophy, affecting about 1 in 3,500 males. It causes gradual muscle weakness and wasting, often involving the heart, nerves, and other systems, leading to cardiopulmonary failure.

As an X-linked disorder, DMD gene mutations cause loss of dystrophin and muscle fiber degeneration. Early prevention and intervention can improve outcomes.

The DMD gene, the largest in humans, shows exon deletions/duplications, point mutations, and small indels; carrier and duplication types are complex and may be missed by standard methods.

DMD and BMD

Duchenne and Becker muscular dystrophy

DMD

Onset at 2–5 years; loss of walking by 13; death around 20–30 years. Symptoms include delayed walking, frequent falls, waddling gait, calf hypertrophy, mild intellectual delay.

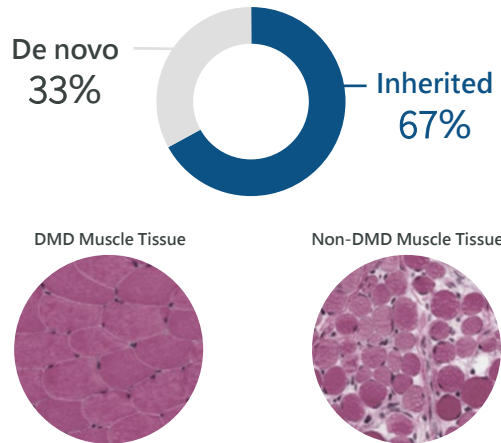
BMD

Later onset, slower and milder course; wheelchair use after 16; lifespan about 40–50 years.

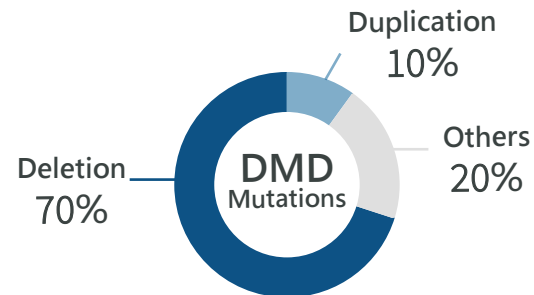
	DMD	BMD
Onset age	2–5 yrs	5–10 yrs
Severity	Severe	Mild
Progression	Rapid	Slow
Life span	20–30 yrs	40–50 yrs

Inheritance Pattern

About 67% of cases are inherited and 33% arise from de novo. Screening is recommended even without family history.



The DMD gene (~2.2 Mb) shows wide variation: 70% deletions, 10% duplications, and 20% small indels or point mutations.



DMD mutations are diverse. Oribio PCR-CE method simultaneously detects exon copy-number changes and small insertions/deletions, achieving a high detection rate.

Higher Detection Yield

Covers CNV and small indels simultaneously

Multiplex PCR accurately detects all 79 DMD exons for copy-number changes while simultaneously identifying small indels. Overall detection performance is superior to MLPA.

Target Population

- Families planning pregnancy or assisted reproduction
- Prenatal screening
- Newborn screening
- Risk assessment for DMD-susceptible families
- Suspected DMD or progressive muscular dystrophy patients

