



Molecular diagnostic reagents and services as cutting edge as you are?

We I.V.DO that™

Product Catalogue

**Medix MDx Molecular
Diagnostics Reagents**

Medix Biochemica



Quality is in our DNA

Medix Biochemica is synonymous with quality which now extends to our new molecular diagnostics division: **MedixMDx**

It's not just the quality of our MDx raw materials either. Our team has extensive experience in IVD kit manufacturing optimization and the product development process.

We've been in your shoes

All our team at MedixMDx has expertise in both MDx IVD raw material manufacturing and MDx IVD kit manufacturing.

We know your pain points and are ready to support you to ensure your commercial success – faster.

Our reagents and ready-to-use master mixes or customized solutions are manufactured and formulated in line with your IVD assay and product development needs. That means that we reduce the complexity and development time for your project, so your MDx solutions get to market more quickly.

We're with you every step of the way

In addition to providing you with the highest quality raw materials, our team has the experience to support you through the entire MDx IVD journey – from proof of concept right through to release to market, reducing both your product development time and budget.

Our team has experience in all **core technologies** including:
qPCR
CRISPR
NGS
RT-qPCR
Isothermal amplification

Proof of concept

- Testing raw materials (enzymes, buffers) or master mix
- Kit, primer/probe design



R&D phase

- Preclinical testing
- Assay optimization primer/probe master mix
- Optimization
- Formulation
- Lyophilization



Verification & validation

- Extensive performance testing
- Stability
- Precision
- Sensitivity
- Specificity
- Clinical studies
- Kit manufacturing readiness



Release for sale

- Kit manufacturing
- Registration
- Regulatory approval
- Sales

Our industry solutions

Endpoint PCR

Full range of endpoint PCR reagents including:

- Hot-start and standard DNA polymerase with buffer
- Convenient master mixes for GC-rich and multiplex reactions

qPCR and RT-qPCR

Optimized ready-to-use solutions for real-time PCR including:

- Probe-based qPCR mixes for standard, fast and ultra-fast applications
- Dye-based qPCR mixes
- Time saving one-step RT-qPCR mixes for quick RNA analysis

Isothermal amplification (iNAAT) & NGS

Optimized ready-to-use solutions for real-time isothermal nucleic acid amplification (iNAAT):

- Fast Bst polymerases
- Fast iNAAT reactions for the rapid detection of DNA/RNA targets
- NGS library quantification kits

Additional Enzymes and Reagents

Variety of reverse transcriptases (RT) for first strand cDNA synthesis

- RNase inhibitor
- Nucleotides in Set and Mix format
- Magnesium Chloride and PCR enhancer
- Available in convenient mix and flexible kit format



Your MDx partner from idea to market

So, whether you're looking for:

- An alternative supplier to secure your supply options
- To consolidate a fragmented supply base under a trusted partner who is ISO 13485 certified
- More technical support locally in your site
- A partner who can help you develop your assays

MedixMDx is ready to partner with you for all your molecular raw material needs and more.

Our portfolio

If you would like to talk to us about securing solutions not listed today on our portfolio, we can explore how these could be developed for you. We are also happy to discuss longer term R&D collaborations for new products / innovative developments in the molecular test market.

Please contact us today.

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ENZYMES

MedixMDx Fast Taq Polymerase

MedixMDx Fast Taq Polymerase is a thermostable recombinant DNA polymerase expressed by *Thermus aquaticus*. MedixMDx Fast Taq Polymerase has 5' to 3' polymerase activity and 5' to 3' exonuclease activity, but lacks 3' to 5' exonuclease activity. The enzyme uses state-

of-the-art polymerase technologies and optimized buffer chemistry for improved polymerase processivity, yield, sensitivity, and specificity. MedixMDx Fast Taq Polymerase has an error rate of approximately 1 error per 2.0 x 10⁵ nucleotides incorporated.

Catalog number	Pack sizes	Application
MX1101	500 units	(q)PCR

MedixMDx HS Taq DNA Polymerase

MedixMDx HS Taq DNA Polymerase is a hot-start thermostable recombinant DNA polymerase expressed by *Thermus aquaticus*. MedixMDx HS Taq Polymerase has 5' to 3' polymerase activity and 5' to 3' exonuclease activity, but lacks 3' to 5' exonuclease activity. The enzyme uses state-of-the-art hot-start antibody-based technology as

well as optimized buffer chemistry for high sensitivity and yield, and rapid polymerase processivity. The enzyme is ideal for complex, difficult DNA templates and is resistant to PCR inhibitors. MedixMDx HS Taq DNA Polymerase has an error rate of approximately 1 error per 2.0 x 10⁵ nucleotides incorporated.

Catalog number	Pack sizes	Application
MX1102	250 units	(q)PCR

Taq hotstart DNA polymerase

Taq hotstart DNA polymerase is an aptamer-based fast-start formulated DNA polymerase supplied with a 10x reaction buffer that has been specially designed for optimal PCR performance and DNA polymerase activity. This DNA

polymerase is suitable for a wide range of PCR applications. Taq hotstart DNA polymerase has a 5' to 3' exonuclease activity and therefore, can be used for hydrolysis probe-based real-time PCRs.

Catalog number	Pack sizes	Application
#1101S	400 units	(q)PCR, Genotyping
#1101L	4000 units	(q)PCR, Genotyping

MedixMDx HS HiFi DNA Polymerase

MedixMDx HS HiFi DNA Polymerase is an aptamer-based hot-start, high fidelity hyperthermophilic recombinant DNA polymerase from the archaeon *Pyrococcus furiosus*. MedixMDx HS HiFi DNA Polymerase exhibits 5' to 3' polymerase activity and 3' to 5' exonuclease activity. The optimized buffer chemistry facilitates high sensitivity, yield,

specificity, robust and rapid polymerase processivity. The enzyme is ideal for long, complex, difficult DNA templates and is resistant to PCR inhibitors. MedixMDx HS HiFi DNA Polymerase has a lower error rate than standard Taq DNA polymerase (100x) and therefore, is suitable for PCR applications where higher accuracy is needed.

Catalog number	Pack sizes	Application
MX1103-100	100 units	(q)PCR
MX1103-500	500 units	(q)PCR

HiDi® DNA polymerase

HiDi® stands for High Discrimination of mismatches at the 3'-terminus of primers in PCR. HiDi® DNA polymerase is a highly selective aptamer-based fast-start formulated DNA polymerase variant suitable for SYBR chemistry, specially optimized for assays in which high discrimination is required.

HiDi® DNA polymerase efficiently amplifies from primers that are matched at the 3'-end and discriminates primers that are mismatched. By using HiDi® DNA polymerase, less than 10 copies of a mutation can be detected in a background of > 10⁴ wild-type copies.

Catalog number	Pack sizes	Application
#9001S	250 units	(q)PCR, Genotyping
#9001M	1000 units	(q)PCR, Genotyping

HiDi® Taq DNA polymerase

HiDi® stands for High Discrimination of mismatches at the 3'-terminus of primers in PCR. HiDi® Taq DNA polymerase is a highly selective aptamer-based fast-start formulated DNA polymerase variant, specially optimized for assays in which high discrimination is required. HiDi® Taq DNA polymerase efficiently amplifies from primers that are matched at the

3'-end and discriminates primers that are mismatched. HiDi® Taq variant has a 5' to 3' exonuclease activity and therefore, can be used for hydrolysis probe-based real-time PCRs. By using HiDi® DNA Taq polymerase, less than 10 copies of a mutation can be detected in a background of > 10⁴ wild-type copies.

Catalog number	Pack sizes	Application
#9201S	250 units	(q)PCR, Genotyping
#9201M	1000 units	(q)PCR, Genotyping

MedixMDx HighScript Reverse Transcriptase

MedixMDx HighScript Reverse Transcriptase is a modified version of MMLV reverse transcriptase with noticeable thermostability and high enzymatic activity. This enzyme is offered as a blend with an RNase inhibitor to prevent RNA

degradation. MedixMDx HighScript Reverse Transcriptase together with enhanced buffer chemistry enables fast, efficient and accurate synthesis of the cDNA molecule.

Catalog number	Pack sizes	Application
MX1104-10	10'000 units	RT-(q)PCR
MX1104-40	40'000 units	RT-(q)PCR

MedixMDx RNase Inhibitor

MedixMDx RNase Inhibitor is a protein that blocks the activity of a variety of ribonucleases due to very fast non-covalent binding of the inhibitor to the active sites of enzymes. Medix RNase Inhibitor is resistant to oxidative stress due to its

lack of cysteine residues and it remains active at 65°C for at least 30 minutes. This RNase inhibitor blocks a wide range of RNases, but does not inhibit RNases T1, T2, U1, U2, CL3, RNase I and H.

Catalog number	Pack sizes	Application
MX1105	2500 units	RT-(q)PCR

RevTaq RT-PCR DNA polymerase

RevTaq RT-PCR DNA polymerase is an engineered, extremely thermostable, aptamer-based fast-formulated reverse transcriptase and combined DNA polymerase with a half-life at 95°C of > 40 min. This enzyme allows reverse transcription reactions at high temperatures, minimizing the problems encountered with strong secondary structures in RNA. RevTaq RT-PCR DNA polymerase allows "zero-step" RT-PCRs

directly from RNA templates without an isothermal reverse transcription step, as reverse transcription takes place simultaneously with DNA amplification during the cycled PCR elongation step. RevTaq RT-PCR DNA polymerase is the pure, reverse transcription active enzyme ingredient of our Volcano3G® RT-PCR Master Mixes.

Catalog number	Pack sizes	Application
#6500S	100 reactions	RT-(q)PCR, (q)PCR
#6500M	500 reactions	RT-(q)PCR, (q)PCR

MedixMDx Fast Bst Polymerase

MedixMDx Fast Bst Polymerase is a recombinant DNA polymerase expressed by *Geobacillus stearothermophilus*. The DNA polymerase displays high strand displacement activity, exhibits 5' to 3' polymerase activity, but lacks 5'

to 3' exonuclease activity. MedixMDx Fast Bst Polymerase is tolerant to inhibitors, enabling rapid and robust isothermal nucleic acid amplification reactions at a constant temperature. The typical reaction temperature is 65°C.

Catalog number	Pack sizes	Application
MX1106-16	1600 units	Isothermal amplification
MX1106-80	8000 units	Isothermal amplification

MedixMDx Fast Bst Polymerase with Fluorescence

MedixMDx Fast Bst Polymerase is a recombinant DNA polymerase expressed by *Geobacillus stearothermophilus*. The DNA polymerase displays high strand displacement activity, exhibits 5' to 3' polymerase activity, but lacks 5' to 3' exonuclease activity. MedixMDx Fast Bst Polymerase

is tolerant to inhibitors, enabling rapid and robust isothermal nucleic acid amplification reactions at a constant temperature. The typical reaction temperature is 65°C. Addition of an intercalating dye allows the reaction to be monitored using a real-time PCR instrument.

Catalog number	Pack sizes	Application
MX1107-16	1600 units	Isothermal amplification
MX1107-80	8000 units	Isothermal amplification

MASTER MIX

MedixMDx qProbe Mix Separate-ROX

MedixMDx qProbe Mix is a universal one-step probe mix for robust, sensitive, and fast qPCR. The mix uses state-of-the-art technologies with an antibody-regulated hot-start Taq

DNA polymerase for real-time PCR amplification of single or multiplex DNA targets. MedixMDx qProbe Mix is compatible with several probes such as TaqMan® and Scorpions®.

Catalog number	Pack sizes	Application
MX2102-1	100 reactions	(q)PCR
MX2102-5	500 reactions	(q)PCR

MedixMDx qGreen Mix Separate-ROX

MedixMDx qGreen Mix is a universal intercalating dye mix for robust, sensitive, and fast qPCR. MedixMDx qGreen Mix uses state-of-the-art technologies with an antibody-regulated

hot-start Taq polymerase and intercalating dye for real-time PCR amplification. The optimized buffer chemistry and PCR enhancers and stabilizers enable rapid and sensitive qPCR.

Catalog number	Pack sizes	Application
MX2101-1	100 reactions	(q)PCR
MX2101-5	500 reactions	(q)PCR

Taq 2x PCR Master Mix

Taq 2x PCR Master Mix is a ready-to-use reaction mix for sensitive, robust and fast PCR. The combination of aptamer-based fast-start Taq DNA polymerase, optimized reaction buffer and ultrapure dNTPs ensures consistent results, rapid set-up time and lower risk of pipetting errors. The Taq DNA

polymerase has a 5' to 3' exonuclease activity and therefore, can be used for hydrolysis probe-based real-time PCRs. It provides a robust PCR performance for a wide range of PCR applications in all standard PCR cyclers.

Catalog number	Pack sizes	Application
#2001	500 reactions	(q)PCR

PlexTaq® 5x qPCR Multiplex Master Mix

PlexTaq® 5x qPCR Multiplex Master Mix is a ready-to-use reaction mix for sensitive and reliable probe-based multiplex qPCR in all standard real-time PCR cyclers. The combination of aptamer-based fast-start Taq DNA polymerase, optimized

reaction buffer and ultrapure dNTPs, ensures consistent results, rapid set-up time and lower risk of pipetting errors. 5x concentration makes this mix optimal for multiplexing application, leaving more room for primers and probes.

Catalog number	Pack sizes	Application
#4000S	100 reactions	(q)PCR
#4000M	500 reactions	(q)PCR

HiDi® 2x PCR Master Mix

HiDi® stands for High Discrimination of mismatches at the 3'-terminus of primers in PCR. HiDi® 2x PCR Master Mix is a ready-to-use master mix specially optimized for assays in which high discrimination with SYBR chemistry is required. The combination of highly selective aptamer-based fast-start formulated HiDi® DNA polymerase and an optimized

buffer with ultrapure dNTPs ensures simple reaction setup and reliable results. HiDi® DNA polymerase efficiently amplifies from primers that are matched at the 3'-end and discriminates primers that are mismatched. By using HiDi® DNA polymerase, less than 10 copies of a mutation can be detected in a background of > 10⁴ wild-type copies.

Catalog number	Pack sizes	Application
#9101S	100 reactions	(q)PCR, Genotyping
#9101M	500 reactions	(q)PCR, Genotyping

HiDi® Taq 2x PCR Master Mix

HiDi® stands for High Discrimination of mismatches at the 3'-terminus of primers in PCR. HiDi® Taq 2x PCR Master Mix is a ready-to-use master mix specially optimized for assays in which high discrimination is required. The combination of highly selective aptamer-based fast-start formulated HiDi® Taq DNA polymerase and an optimized buffer with ultrapure dNTPs ensures simple reaction setup and reliable results.

HiDi® Taq DNA polymerase efficiently amplifies from primers that are matched at the 3'-end and discriminates primers that are mismatched. The variant has a 5' to 3' exonuclease activity and therefore, can be used for hydrolysis probe-based real-time PCRs. By using HiDi® Taq DNA polymerase, less than 10 copies of a mutation can be detected in a background of >10⁴ wild-type copies.

Catalog number	Pack sizes	Application
#4200S	100 reactions	(q)PCR, Genotyping
#4200M	500 reactions	(q)PCR, Genotyping

MedixMDx qRT-Probe Mix No-ROX

MedixMDx qRT-Probe Mix is a universal one-step probe mix for robust, sensitive, and fast RT-qPCR. The mix uses state-of-the-art technologies with an antibody-regulated hot-start Taq DNA polymerase and reverse transcriptase for efficient cDNA synthesis and real-time. The kit includes an efficient

thermostable reverse transcriptase with an RNase inhibitor (RTase Amp) to prevent degradation of RNA templates by RNases. MedixMDx qRT-Probe Mix is compatible with several probes such as TaqMan® and Scorpions®.

Catalog number	Pack sizes	Application
MX2103-1	100 reactions	RT-(q)PCR
MX2103-5	500 reactions	RT-(q)PCR

MedixMDx qRT-Probe Mix Separate-ROX

MedixMDx qRT-Probe Mix is a universal one-step probe mix for robust, sensitive, and fast RT-qPCR. The mix uses state-of-the-art technologies with an antibody-regulated hot-start Taq DNA polymerase and reverse transcriptase for efficient cDNA synthesis and real-time. The kit includes a ROX

additive and an efficient thermostable reverse transcriptase with an RNase inhibitor (RTase Amp) to prevent degradation of RNA templates by RNases. MedixMDx qRT-Probe Mix is compatible with several probes such as TaqMan® and Scorpions®.

Catalog number	Pack sizes	Application
MX2104-1	100 reactions	RT-(q)PCR
MX2104-5	500 reactions	RT-(q)PCR

MedixMDx HiPlex qRT-Probe Mix No-ROX

MedixMDx HiPlex qRT-Probe Mix is an advanced formulated one-step qRT-PCR probe mix for highly sensitive, rapid, and robust detection of RNA target templates. MedixMDx HiPlex qRT-Probe Mix uses state-of-the-art technologies with an antibody-regulated hot-start Taq DNA polymerase and ultra-sensitive reverse transcriptase for efficient cDNA synthesis and real-time PCR amplification. MedixMDx HiPlex qRT-Probe

Mix is formulated as a 4x mix, which enables extensive multiplexing and addition of larger volumes of RNA templates to reactions. It includes an efficient thermostable reverse transcriptase with RNase inhibitor to prevent degradation of RNA templates by RNases. MedixMDx HiPlex qRT-Probe Mix is compatible with several probes such as TaqMan® and Scorpions®.

Catalog number	Pack sizes	Application
MX2105-1	200 reactions	RT-(q)PCR
MX2105-10	600 reactions	RT-(q)PCR

Volcano3G® RT-PCR 2x Master Mix (+GreenDye)

Volcano3G® RT-PCR 2x Master Mix (+GreenDye) is a ready-to-use master mix for reliable qPCR and RT-qPCR in all standard PCR cyclers. The mix contains an aptamer-based fast-start formulated enzyme blend of a robust Taq DNA polymerase and an engineered thermostable Volcano3G®

DNA polymerase with reverse transcriptase activity. The mix is supplemented with a highly sensitive GreenDye (2000) with low polymerase inhibition. Volcano3G® RT-PCR master mix enables amplification of RNA target sequences with quick and easy PCR protocols, even including “zero-step” amplification.

Catalog number	Pack sizes	Application
#6301S	100 reactions	RT-(q)PCR, (q)PCR
#6301M	500 reactions	RT-(q)PCR, (q)PCR

Volcano3G® RT-PCR 2x Master Mix (+GreenDye, +low ROX)

Volcano3G® RT-PCR 2x Master Mix (+GreenDye) is a ready-to-use master mix for reliable qPCR and RT-qPCR in all standard PCR cyclers. The mix contains an aptamer-based fast-start formulated enzyme blend of a robust Taq DNA polymerase and an engineered thermostable Volcano3G® DNA polymerase with reverse transcriptase activity. The mix

is supplemented with a highly sensitive GreenDye (2000) with low polymerase inhibition. Volcano3G® RT-PCR master mix enables amplification of RNA target sequences with quick and easy PCR protocols, even including “zero-step” amplification. Supplied with low ROX concentration (50 nM).

Catalog number	Pack sizes	Application
#6401LoS	100 reactions	RT-(q)PCR, (q)PCR
#6401LoM	500 reactions	RT-(q)PCR, (q)PCR

Volcano3G® RT-PCR 2x Master Mix (+GreenDye, +high ROX)

Volcano3G® RT-PCR 2x Master Mix (+GreenDye) is a ready-to-use master mix for reliable qPCR and RT-qPCR in all standard PCR cyclers. The mix contains an aptamer-based fast-start formulated enzyme blend of a robust Taq DNA polymerase and an engineered thermostable Volcano3G® DNA polymerase with reverse transcriptase activity. The mix

is supplemented with a highly sensitive GreenDye (2000) with low polymerase inhibition. Volcano3G® RT-PCR master mix enables amplification of RNA target sequences with quick and easy PCR protocols, even including “zero-step” amplification. Supplied with high ROX concentration (500 nM).

Catalog number	Pack sizes	Application
#6401HiS	100 reactions	RT-(q)PCR, (q)PCR
#6401HiM	500 reactions	RT-(q)PCR, (q)PCR

Volcano3G® RT-PCR Probe 2x Master Mix

Volcano3G® RT-PCR Probe 2x Master Mix has all necessary components for sensitive and reliable RT-qPCRs. It includes an aptamer-based fast-start formulated enzyme blend of a robust Taq DNA polymerase and an engineered thermostable Volcano3G® DNA polymerase with reverse transcriptase activity. With the combination of optimized

reaction buffer, ultrapure dNTPs and a blue stain for visualization, Volcano3G® RT-PCR Probe 2x Master Mix reduces the need for sample extraction and sample lysis. Volcano3G® RT-PCR Probe 2x Master Mix enables amplification of RNA target sequences with quick and easy PCR protocols, even including “zero-step” amplification.

Catalog number	Pack sizes	Application
#6101S	100 reactions	RT-(q)PCR, (q)PCR
#6101M	500 reactions	RT-(q)PCR, (q)PCR

Volcano3G® RT-PCR Probe 2x Master Mix (+low ROX)

Volcano3G® RT-PCR Probe 2x Master Mix has all necessary components for sensitive and reliable RT-qPCRs. It includes an aptamer-based fast-start formulated enzyme blend of a robust Taq DNA polymerase and an engineered thermostable Volcano3G® DNA polymerase with reverse transcriptase activity. With the combination of optimized reaction buffer,

ultrapure dNTPs and a blue stain for visualization, Volcano3G® RT-PCR Probe 2x Master Mix reduces the need for sample extraction and sample lysis. Volcano3G® RT-PCR Probe 2x Master Mix enables amplification of RNA target sequences with quick and easy PCR protocols, even including “zero-step” amplification. Supplied low high ROX concentration (50 nM).

Catalog number	Pack sizes	Application
#6201LoS	100 reactions	RT-(q)PCR, (q)PCR
#6201LoM	500 reactions	RT-(q)PCR, (q)PCR

Volcano3G® RT-PCR Probe 2x Master Mix (+high ROX)

Volcano3G® RT-PCR Probe 2x Master Mix has all necessary components for sensitive and reliable RT-qPCRs. It includes an aptamer-based fast-start formulated enzyme blend of a robust Taq DNA polymerase and an engineered thermostable Volcano3G® DNA polymerase with reverse transcriptase activity. With the combination of optimized reaction buffer,

ultrapure dNTPs and a blue stain for visualization, Volcano3G® RT-PCR Probe 2x Master Mix reduces the need for sample extraction and sample lysis. Volcano3G® RT-PCR Probe 2x Master Mix enables amplification of RNA target sequences with quick and easy PCR protocols, even including “zero-step” amplification. Supplied with high ROX concentration (500 nM).

Catalog number	Pack sizes	Application
#6201HiS	100 reactions	RT-(q)PCR, (q)PCR
#6201HiM	500 reactions	RT-(q)PCR, (q)PCR

Volcano3G® RT-PCR Probe 2x Master Mix IVD

Volcano3G® RT-PCR Probe 2x Master Mix IVD has all necessary components for sensitive and reliable RT-qPCRs. It includes an aptamer-based fast-start formulated enzyme blend of a robust Taq DNA polymerase and an engineered thermostable Volcano3G® DNA polymerase with reverse transcriptase activity. With the combination

of optimized reaction buffer, ultrapure dNTPs and a blue stain for visualization, Volcano3G® RT-PCR Probe 2x Master Mix reduces the need for sample extraction and sample lysis. Volcano3G® RT-PCR Probe 2x Master Mix enables amplification of RNA target sequences with quick and easy PCR protocols, even including “zero-step” amplification.

Catalog number	Pack sizes	Application
#6101CE	100 reactions	RT-(q)PCR, (q)PCR

MedixMDx Fast Bst Mix

MedixMDx Fast Bst Mix is a ready-to-use mix containing recombinant DNA polymerase expressed by *Geobacillus stearothermophilus*. The Bst DNA polymerase displays high strand displacement activity, exhibits 5' to 3' polymerase activity, but lacks 5' to 3' exonuclease activity. MedixMDx

Fast Bst Mix is tolerant to inhibitors, enabling rapid and robust isothermal nucleic acid amplification reactions at a constant temperature. The typical reaction temperature is 65°C. Addition of an intercalating dye allows the reaction to be monitored using a real-time PCR instrument.

Catalog number	Pack sizes	Application
MX2106-1	100 reactions	Isothermal amplification
MX2106-5	500 reactions	Isothermal amplification

MedixMDx Fast Bst RT Mix

MedixMDx Fast Bst RT Mix is a ready-to-use mix containing recombinant DNA polymerase expressed by *Geobacillus stearothermophilus*. The Bst DNA polymerase displays high strand displacement activity, exhibits 5' to 3' polymerase activity, but lacks 5' to 3' exonuclease activity. MedixMDx Fast Bst RT Mix also contains an efficient thermostable reverse transcriptase with an RNase inhibitor (RTase Amp) to

prevent degradation of RNA templates by RNases. MedixMDx Fast Bst RT Mix is tolerant to inhibitors, enabling rapid and robust isothermal nucleic acid amplification reactions at a constant temperature. The typical reaction temperature is 65°C. Addition of an intercalating dye allows the reaction to be monitored using a real-time PCR instrument.

Catalog number	Pack sizes	Application
MX2107-1	100 reactions	Isothermal amplification
MX2107-5	500 reactions	Isothermal amplification

LYO READY

MedixMDx qPCR Lyo ready mix

MedixMDx qPCR Lyo ready mix is a universal probe mix that allows robust, sensitive, and fast qPCR for the detection of single or multiplex DNA targets. MedixMDx qPCR Lyo ready mix contains optimized excipients, buffer, PCR enhancers and an antibody-regulated hot-start Taq DNA polymerase and is ready to be lyophilized to produce stable reagents at

room temperature. Upon addition of target specific primers/probes to the master mix, the mixture can be lyophilized directly, without the need to add additional excipients. MedixMDx qPCR Lyo ready mix is compatible with several probes such as TaqMan® and Scorpions®.

Catalog number	Pack sizes	Application
MX6101-5	5 mL	(q)PCR
MX6101-100	100 mL	(q)PCR

MedixMDx qRT-PCR Lyo ready mix

MedixMDx qRT-PCR Lyo ready mix is a universal probe mix that allows robust, sensitive, and fast RT-qPCR for the detection of single or multiplex RNA or DNA targets. MedixMDx qRT-PCR Lyo ready mix contains optimized excipients, buffer, PCR enhancers and an antibody-regulated hot-start Taq DNA polymerase and is ready to be lyophilized to produce stable reagents at room temperature.

MedixMDx qRT-PCR Lyo ready mix is ready to be lyophilized to produce stable reagents at room temperature. Upon addition of target specific primers/probes and reverse transcriptase (RTase Lyo) to the master mix, the mixture can be lyophilized directly, without the need to add additional excipients. MedixMDx qRT-PCR Lyo ready mix is compatible with several probes such as TaqMan® and Scorpions®.

Catalog number	Pack sizes	Application
MX6102-5	5 mL	RT-(q)PCR
MX6102-100	100 mL	RT-(q)PCR

FREEZE-DRIED

qPCR Probe 2x LyoCake Master Mix (freeze-dried)

qPCR Probe 2x Lyocake Master Mix is a ready-to-use reaction mix for sensitive and reliable probe-based qPCR in all standard real-time PCR cyclers. It includes an engineered, aptamer-based fast-start DNA polymerase,

optimized reaction buffer and ultrapure dNTPs. Freeze-dried qPCR Probe 2x Lyocake Master Mix can be stored at room temperature.

Catalog number	Pack sizes	Application
#9801IyoS	80 reactions	(q)PCR
#9801IyoM	400 reactions	(q)PCR

qPCR Probe LyoBeads, pre-dispensed (high profile 0.2 mL)

qPCR Probe LyoBeads are ready-to-use, freeze-dried master mix beads with all necessary components for rapid and sensitive PCR. The combination of aptamer-based fast-start formulated DNA polymerase, optimized reaction buffer and ultrapure dNTPs in a freeze-dried format results in a cost

efficient and ecological master mix that can be rehydrated within seconds in any aqueous solutions. LyoBeads can be shipped and stored at room temperature. Supplied in high profile PCR tubes (0.2 mL).

Catalog number	Pack sizes	Application
#2201HiPS	96 reactions	(q)PCR
#2201HiPM	5x96 reactions	(q)PCR

qPCR Probe LyoBeads, pre-dispensed (low profile 0.1 mL)

qPCR Probe LyoBeads are ready-to-use, freeze-dried master mix beads with all necessary components for rapid and sensitive PCR. The combination of aptamer-based fast-start formulated DNA polymerase, optimized reaction buffer and ultrapure dNTPs in a freeze-dried format results in a cost

efficient and ecological master mix that can be rehydrated within seconds in any aqueous solutions. LyoBeads can be shipped and stored at room temperature. Supplied in low profile PCR tubes (0.1 mL).

Catalog number	Pack sizes	Application
#2201LoPS	96 reactions	(q)PCR
#2201LoPM	5x96 reactions	(q)PCR

KIT

DirectBlood Genotyping PCR Kit

DirectBlood Genotyping PCR Kit enables sensitive, rapid and reproducible real-time PCR detection of a wide range of SNPs from EDTA blood samples without prior DNA

extraction. 2x DirectBlood Genotyping PCR Mix includes an engineered, aptamer-based fast-start DNA polymerase, optimized reaction buffer and ultrapure dNTPs.

Catalog number	Pack sizes	Application
#5000S	100 reactions	Genotyping, Direct (q)PCR
#5000M	500 reactions	Genotyping, Direct (q)PCR

MedixMDx Library Quant Kit for Illumina® Separate-ROX

The MedixMDx Library Quant Kit is a quantitative PCR (qPCR) kit for accurate quantification of adapter ligated molecules to be used for Illumina® NGS equipment. This kit includes five DNA

standards for easy and precise quantification. It also includes MedixMDx qGreen Mix, which uses antibody-mediated hot-start activity to achieve a common start for all reactions.

Catalog number	Pack sizes	Application
MX5101-10	100 reactions	NGS
MX5101-50	500 reactions	NGS

SUBSTRATE

dNTP Sets (100 mM solution)

MedixMDx deoxynucleotide triphosphate (dNTP) Set contains separately packaged 2'-deoxyadenosine-5'-triphosphate (dATP), 2'-deoxycytidine-5'-triphosphate (dCTP), 2'-deoxyguanosine-5'-triphosphate (dGTP), and 2'-deoxythymidine-5'-triphosphate (dTTP). The dNTP Set is a

clear aqueous solution (pH 8.5) with greater than 99% purity. The solution is free of human and bacterial DNA as well as RNases and DNases. This ensures robust performance and reproducible results. The concentration of each dNTP is 100 mM.

Catalog number	Pack sizes	Application
MX4501-100	4x 100 mM	(q)PCR

dNTP Mixes - 25 mM each (100 mM total)

MedixMDx deoxynucleotide triphosphate (dNTP) Mix is a highly pure mixture of 2'-deoxyadenosine-5'-triphosphate (dATP), 2'-deoxycytidine-5'-triphosphate (dCTP), 2'-deoxyguanosine-5'-triphosphate (dGTP), and 2'-deoxythymidine-5'-triphosphate (dTTP). The dNTP Mix is a

clear aqueous solution (pH 8.5) with greater than 99% purity. The solution is free of human and bacterial DNA as well as RNases and DNases. This ensures robust performance and reproducible results. The dNTP Mix contains 25 mM of each nucleotide.

Catalog number	Pack sizes	Application
MX4502-25	25 mM each	(q)PCR

dUTP (100 mM)

MedixMDx 2'-deoxyuridine-5'-triphosphate (dUTP) sodium salt solution is a clear aqueous solution (pH 8.5) with greater than 99% purity. The solution is free of human and bacterial

DNA as well as RNases and DNases. This ensures robust performance and reproducible results.

Catalog number	Pack sizes	Application
MX4503-100	100 mM	(q)PCR

OTHER

MedixMDx Anti-Taq Polymerase mAb (Clone MC1101)

MedixMDx Anti-Taq Polymerase mAb is a highly purified monoclonal antibody that binds to DNA polymerase from *Thermus aquaticus* (Taq polymerase). Anti-Taq Polymerase mAb binds to and inactivates Taq DNA polymerase at

room temperature. MedixMDx Anti-Taq Polymerase mAb dissociates from Taq DNA polymerase at elevated temperatures (higher than 50°C).

Catalog number	Pack sizes	Application
MX71031-1	1 mg	(q)PCR
MX71031-5	5 mg	(q)PCR

GreenDye 20x

GreenDye is a highly sensitive intercalating DNA dye with a very low polymerase inhibition. GreenDye features very high fluorescence, consistent results and thermostability for more

than 50 cycles. It is compatible with real-time PCR cyclers that support SYBR or FAM channels making it suitable for numerous applications.

Catalog number	Pack sizes	Application
#2000S	200 reactions	(q)PCR, Isothermal amplification
#2000M	800 reactions	(q)PCR, Isothermal amplification

Application description

(q)PCR

Quantitative real-time PCR (qPCR) builds on the same principles as conventional PCR. However, qPCR uses fluorescent reporter molecules to allow quantification of amplified products. Common approaches to generate a fluorescent signal used for measuring DNA quantity in this technique are to use either hydrolysis probes such as TaqMan® probes, or a double-stranded DNA binding dye such as SYBR® Green dye. Since the products are detected

as the reaction proceeds, qPCR offers a wider dynamic range of analysis than conventional PCR; from a single copy to around 10¹¹ copies are detectable within a single run. This technique is commonly used for amplifying DNA, which can then be used for gene cloning, sequencing, gene manipulation and eventually disease diagnosis.

RT-(q)PCR

RT-qPCR, or quantitative reverse transcription PCR, combines the effects of reverse transcription and quantitative PCR or real-time PCR to amplify and detect specific RNA targets. Common approaches to generate a fluorescent signal used for measuring DNA quantity in this technique are to use either hydrolysis probes such as TaqMan® probes, or a double-stranded DNA binding dye such as SYBR® Green dye. The process of RT-qPCR is performed by reverse

transcription of total RNA or mRNA to complementary DNA (cDNA) by the enzyme reverse transcriptase, followed by amplification and detection of specific targets of this cDNA using quantitative real-time PCR (qPCR). RT-qPCR is commonly used for quantifying gene expression levels, validating RNA interference (RNAi), and detecting pathogens such as viruses.

NGS

Next-Generation Sequencing (NGS) is a high-throughput methodology that enables rapid sequencing of the base pairs in DNA or RNA samples. NGS supports a broad range of applications, including gene expression profiling, chromosome counting, detection of epigenetic changes, and molecular analysis. NGS methods have evolved from the first-generation Sanger sequencing to offer different platforms with different chemistries and very high-throughput

instruments and tunable resolution. Today's powerful and flexible nature of NGS offers diverse applications from whole-genome sequencing made faster and easier to targeted sequencing on a subset of genes complete within just a few hours.

Isothermal amplification

Isothermal amplification methods can amplify nucleic acids exponentially at constant temperature, eliminating the need for thermocycler equipment. Because the DNA strands are not heat-denatured, all isothermal methods rely on an alternative approach to enable primer binding and initiation of the amplification reaction: a polymerase with high strand-displacement activity. To detect RNA, a reverse

transcriptase is added to the reaction for a pre-amplification reverse transcription step. Isothermal amplification offers high specificity. Isothermal amplification chemistry has been applied to diagnostics with great success and is utilized in several commercial molecular diagnostic platforms, serving large testing centers and point-of-care markets.

Genotyping

Genotyping is the technology that detects genetic differences by comparing a DNA sequence to that of another sample or a reference sequence. It identifies small variations in the genetic sequence within populations, such as single-nucleotide polymorphisms (SNPs). Those SNPs are single base-pair changes in DNA that occur at specific places in the genome. SNPs are the most common type

of genetic variation in humans, they can explain changes in phenotypic traits, and pathological changes in genetic diseases. SNP genotyping has many applications including disease association, population genomics, trait selection in agriculture and antibiotic-resistance detection in bacteria. The use of quantitative real-time PCR enables a swift screening of known SNPs.

Direct (q)PCR

Direct (q)PCR permits classical PCR amplification directly from the small amount of samples without DNA extraction and purification. Direct (q)PCR enables to quantify and detect DNA directly from a cell suspension, or a cell lysate, without a need of purification steps. It usually requires to pre-treat the cells then to add the cell suspension directly to the (q) PCR reaction mix. From there, the sample is ready to place

in a real-time cycler, and normal (q)PCR protocol is applied. Similar to conventional (q)PCR, the DNA quantity is measured using either hydrolysis probes such as TaqMan® probes, or a double-stranded DNA binding dye such as SYBR® Green dye. Direct (q)PCR is best suited for the amplification of DNA from a variety of samples such as blood, saliva, tissue, cultured cells or plant.

Direct RT-(q)PCR

Direct RT-(q)PCR permits classical RT-(q)PCR directly from the small amount of samples without RNA extraction and purification. Direct RT-(q)PCR enables to quantify and detect RNA directly from a cell suspension, or a cell lysate, without a need of purification steps. It usually requires to simply detach the cells then to add the cell suspension directly to the RT-(q)PCR reaction mix. From there, the sample is ready to

place in a real-time cycler, and normal RT-(q)PCR protocol is applied. Similar to RT-(q)PCR, the DNA quantity is measured using either hydrolysis probes such as TaqMan® probes, or a double-stranded DNA binding dye such as SYBR® Green dye. Direct RT-(q)PCR is best suited for the amplification of RNA from a variety of samples such as blood, saliva, tissue, cultures cells or plant.

Medix Biochemicala

More information on our products

medixbiochemicala.com

Klovinpellontie 3, FI-02180 Espoo, Finland

Orders and product information

mdx@medixbiochemicala.com



Oy Medix Biochemica Ab
Klovinpellontie 3, FI-02180 Espoo,
Finland



myPOLS Biotec GmbH
Byk-Gulden-Str. 2 // 10, 78467 Konstanz,
Germany

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