



**PROCOMCURE
BIOTECH**

**PCR REAGENTS
MADE IN AUSTRIA**



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Procomcure Biotech GmbH
Breitwies 1
5303 Thalgau
AUSTRIA

www.procomcure.com
office@procomcure.com



ISO 9001:2015
ISO 13485:2016

Who is Procomcure Biotech?

History

Procomcure - founded in 2007 - is a biotech company located in Austria in the heart of the beautiful Lakeland of Salzburg. A strong team of highly skilled professionals, from biochemists to molecular and cell biologists are working on innovative products and high-tech solutions.

Designer Enzymes & Premium PCR Products

Genetics & Bioengineering are our core expertise and are used for directed *in-vitro* evolution of novel enzymes with improved properties for Research and Diagnostics.

Intellectual Property

A strong patent and IP portfolio, including proprietary methods for molecular evolution and bioprocess engineering are the guarantee for more accurate, robust, powerful polymerases and better PCR results.

Custom solutions

Beyond off-the shelf products, we are open for custom enzyme and assay development in close cooperation with our customers.

Complete OEM solutions

We can project manage the entire OEM process for your organization. This entails seamless integration of your branding into our operations workflow as you prefer.

OEM, Bulk or Full Branded Solutions

We can supply goods in bulk under white label for your own repackaging systems. Alternatively, we can create new packaging solutions to your specification complete with your own branding.

Made in Austria

We are proud to not simply assemble purchased components but to deliver products fully "Made in Austria" including design, development and manufacturing.

Quality Management Systems

Procomcure is certified after the ISO Norms **ISO 9001:2015** (for the development, distribution and production of molecular biological, cell biological and PCR products) and **ISO 13485:2016** for the design, production and distribution of Medical Devices and associated Technical Services.



QUALITY WITHOUT COMPROMISE

Which reagent is right for your application?

When designing your PCR experiment, it is crucial to know the parameters that matter: do I want to amplify a long sequence? Do I want my PCR to be fast? Am I doing endpoint or real-time PCR? Do I need extra fidelity? All of these questions need to be addressed before starting to work.

Different applications require different products to provide the best possible combination of buffer and polymerase to make your experiment a success.

To find the perfect solution, check the icons next to each product for features that are important for your experiment. If you are not entirely sure which one is best for you, refer to the icons description or contact us for advice at support@procomcure.com.

Features



Standard

Standard enzymes are robust and reliable enzymes that are mostly used in routine applications such as colony PCR where all that matters is a clean product of a defined size. VitaTaq® polymerase produces single-stranded A-tails that can be used for TA-cloning, VitaProof® produces amplicons with blunt ends.



HotStart

HotStart polymerases are first activated upon the initial denaturation in the thermocycler. This allows for reaction setup at room temperature and increases specificity and yield. HotStart is favourable for complex DNA targets or multiplex applications or simply for convenient reaction setup.



High Fidelity

High fidelity PCR reagents work with proofreading polymerases that are capable of correcting falsely incorporated bases. They are the best choice if you have downstream applications for the amplified sequence like sequencing or cloning.



Gel Loading

Products with a gel loading feature already contain a gel tracking dye to monitor the electrophoresis process and loading aid that makes the samples sink into the gel slots. Products with gel loading features are convenient to use as the addition of a separate loading dye after the PCR is not necessary. This saves time especially when processing a larger sample number.



Multiplex

Multiplex PCR is a highly complex procedure as several different primer pairs need to anneal properly and be amplified uniformly. PCR products for multiplex have a HotStart feature for increased specificity and an optimized buffer environment that allows for specific primer annealing and efficient amplification.



Long Range

In Long Range PCR, targets are often more than 5 kb long. Therefore, reagents for long amplification contain a fast polymerase to keep reaction times at a reasonable level and a special buffer formulation that protects the enzyme during prolonged periods at higher temperature and ensures specificity over long extension.



2X Mastermix

A 2X mastermix is a convenient solution for fast, easy and reproducible reaction setup. The mastermix contains a polymerase, an optimized buffer environment and dNTPs. All there is to add is your primer and template. 2X mastermix formulations are favourable if your reaction conditions do not change much and if you want to process a large number of samples.



Plant PCR

Plant material is often tricky to analyze in PCR as the template material contains a lot of PCR inhibiting agents that often stick with the DNA even after DNA isolation. PCR reagents that are designed for plant-based PCR work with a special buffer composition, that renders many plant-based inhibitors harmless. In endpoint applications, the use of plant extracts or direct samples is possible for extra convenience.



GC-Rich

"GC-rich PCR" applies if your sequence of interest contains more than 60% GC base pairs. These sequences require higher temperatures for amplification than regular sequences and polymerases that can work under these suboptimal conditions.



Dx

Dx-Products contain VitaDx® Taq, a highly pure polymerase with all favourable features of a Taq polymerase (robust, fast and efficient amplification) but free from human, bacterial, parasitic viral and fungal DNA. The missing DNA background can reduce non-specific amplification events and increases precision of PCR analysis, an important feature when performing bacterial genome analysis.



PCC

Products labeled „PCC“ are our own proprietary inventions. They contain enzymes that have been developed by our team of experts in-house. Through *in-vitro* evolution, we developed bio-engineered designer polymerases that exhibit exceptional features such as high fidelity and superior processivity.

To help you choose the right enzyme for your application, we created a at-one-glance overview that shows you which product suits your application.

Best Choice

This is our recommendation for the indicated purpose. Choose this if you have a very specific application in mind.

Good option

Choosing this enzyme will most likely work for your purpose, but there might be a better choice. Choose this if you need the reagents for several different applications.

Suitable

Suitable means that a certain application might be possible with the enzyme but results will probably not be as good as they could be.

Not recommended

If a product is not recommended for a certain application, you will not get the results you want (e.g. blunt ends for TA-cloning).

	VitaTaq®	VitaTaq® HS	VitaProof®	Indominus™	VitaTaq®/ VitaProof® Blend	VitaDx Taq®
Standard PCR	Good Option	Best Choice	Good Option	Suitable	Good Option	Good Option
Fast PCR	Good Option	Good Option	Not recommended	Best Choice	Suitable	Good Option
Multiplex PCR	Good Option	Best Choice	Not recommended	Good Option	Not recommended	Good Option
Colony PCR	Good Option	Best Choice	Suitable	Suitable	Suitable	Good Option
Long Amplification	Suitable	Suitable	Not recommended	Good Option	Best Choice	Suitable
GC-Rich Amplification	Good Option	Good Option	Suitable	Suitable	Suitable	Good Option
Cloning (TA)	Good Option	Best Choice	Good Option	Not recommended	Not recommended	Good Option
Cloning (Blunt End)	Not recommended	Not recommended	Good Option	Best Choice	Not recommended	Not recommended
High Fidelity	Not recommended	Not recommended	Good Option	Best Choice	Suitable	Not recommended
Diagnostics	Not recommended	Not recommended	Not recommended	Not recommended	Not recommended	Best Choice

Endpoint PCR

VitaTaq® DNA Polymerase

VitaTaq® DNA Polymerase is a robust and reliable Taq DNA polymerase suitable for all common PCR applications. It is the perfect enzyme for all kinds of standard PCR applications due to its sensitive and efficient amplification features.

VitaTaq® DNA Polymerase does not exhibit detectable DNase/RNase activity and shows purity > 95% on SDS PAGE.

For maximum flexibility, we developed VitaTaq® PCR Kit, where buffer and enzyme are delivered separately, for maximum convenience, there is 2X HS Mastermix Clear or Gold.

Applications

- colony PCR
- GC rich amplifications
- Genotyping
- 3'-dA-Tailing of PCR amplicons

DID YOU KNOW?

Quality of dNTPs is crucial for the success of your PCR experiment! We offer high-quality dNTPs to complement our kits:

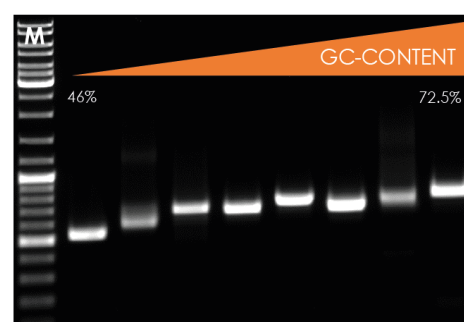
Product	Size	SKU
dNTP Mix (10 mM each)	0.5 ml	PCCSKU1019
	1 ml	PCCSKU1020
	2.5 ml	PCCSKU1021

VitaTaq® PCR Kit & HS PCR Kit



VitaTaq® PCR Kits are classic PCR reagent sets: enzyme and buffer come separately. This allows you to adapt as much about the reaction setup as is necessary for your application. The concentrated 10X VitaTaq® Buffer leaves enough spare volume to add extra components like PCR additives if you wish.

With our optimized buffer formulation, VitaTaq® DNA Polymerase can amplify even complex target sequences with a GC-content up to 72.5% while still being highly specific and efficient (Fig. 1).



VitaTaq® PCR Kit was used to amplify 8 sequences from human genomic DNA from 584 bp to 801 bp with a GC-content from 46% to 72.5%. Amplification was successful and specific for all targets.

Product	Size	SKU
VitaTaq® PCR Kit	500 units	PCCSKU1001
	1000 units	PCCSKU1002
	5000 units	PCCSKU1003
VitaTaq® HS PCR Kit	200 units	PCCSKU1032
	500 units	PCCSKU1033
	1000 units	PCCSKU1034

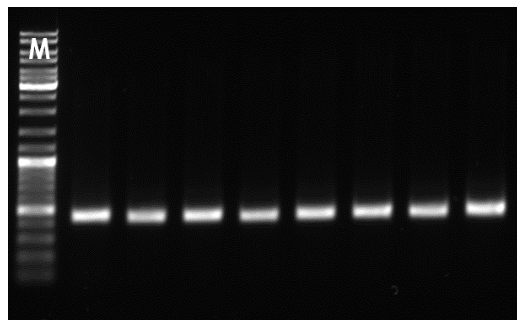


2X HS Mastermix Clear & Gold



2X HS Mastermix Clear and Gold are 2X formulations of VitaTaq® DNA Polymerase that were developed for routine applications that must be as standardized as possible and do not allow for reaction-to-reaction deviations.

2X HS Mastermix Clear is suitable for all downstream applications, including fluorescence based applications. 2X HS Mastermix Gold is the best choice if you want to analyse your samples by gel electrophoresis e.g. after colony PCR. A loading agent and a tracking dye migrating at ~ 50 bp make your samples ready to load and save time and extra pipetting steps



2X HS Mastermix Clear was used to amplify a plasmid-based sequence of 475 bp in 8 single reactions. Amplification was highly specific and performance showed no variations from reaction to reaction.

Product	Size	SKU
2X HS Mastermix Clear	2 ml	PCCSKU1004
	5 ml	PCCSKU1005
	10 ml	PCCSKU1006
2X HS Mastermix Gold	2 ml	PCCSKU1007
	5 ml	PCCSKU1008
	10 ml	PCCSKU1009



Vita DxTaq® HS PCR Kit

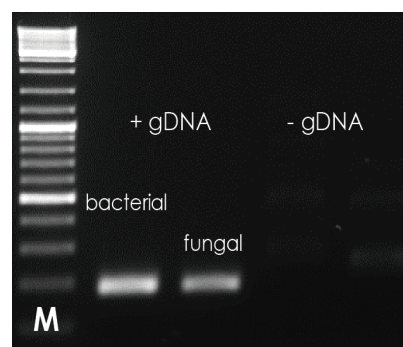


Vita DxTaq® is a unique designer polymerase that was developed exclusively for applications that require exceptional specificity and precision. This is achieved through a total lack of bacterial, fungal and human background DNA, making it the perfect choice for sophisticated diagnostic applications where results must be absolute.

The antibody-mediated HotStart feature allows for reaction setup at room temperature and grants full control over the reaction start.

Vita DxTaq® is completely free from bacterial, viral, parasitic, fungal and human DNA.

Product	Size	SKU
Vita DxTaq® HS PCR Kit	100 units	PCCSKU1035
	500 units	PCCSKU1036
	2500 units	PCCSKU1037



Vita DxTaq® was tested in endpoint PCR with and without bacterial & fungal gDNA with primers specific for a 200 bp pan-bacteria / pan-fungi sequence. No amplification occurred after 50 cycles without added template DNA.

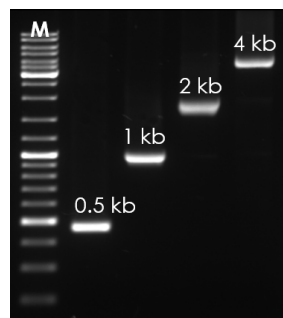
VitaFast 2X Mastermix



VitaFast 2X Mastermix is the ideal choice for standard PCR applications where you want quick results e.g. in colony PCR.

Reaction setup is fast due to the 2X Mastermix formulation, amplification happens within 15 seconds per kb and variation between reactions is minimized.

Product	Size	SKU
VitaFast 2X Mastermix	2 ml	PCCSKU1028
	5 ml	PCCSKU1029



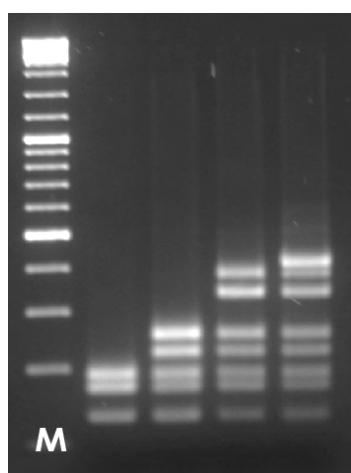
A 4 kb target sequence could be amplified with Vita Fast 2X Mastermix in as little as **60** seconds extension.

VitaTaq® HS Multiplex Kit



VitaTaq® HS Multiplex Kit is a convenient multiplex formulation of the robust & efficient VitaTaq® DNA Polymerase optimized for applications with multiple primer pairs in one reaction.

The 5X reaction buffer supports efficient & selective annealing of all primers to the template DNA and protects the enzyme during long PCR experiments and under harsh cycling conditions. The HotStart antibody ensures full control over the amplification start and prevents non-specific amplification.



A set of validated multiplex primers was used with VitaTaq® HS Multiplex Kit. Reactions contained a 3- / 5- / 7- and 9-plex of primers; all were amplified successfully and uniformly.

Product	Size	SKU
VitaTaq® HS Multiplex Kit	100 rxn / 50 µl	PCCSKU1010
	200 rxn / 50 µl	PCCSKU1011
	500 rxn / 50 µl	PCCSKU1012

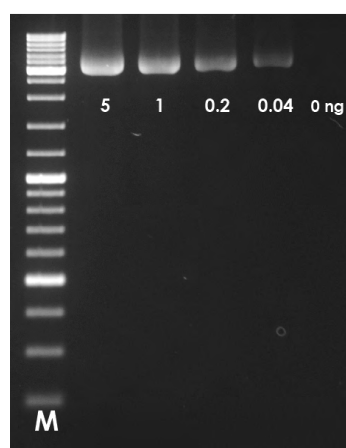
Vita LongRange Kit



Vita LongRange Kit provides a sensitive and fast option for the amplification of long targets up to 15 kb.

The balanced enzyme blend combines the best features of VitaTaq® and VitaProof®: short extension times of 30 seconds / kb combined with the increased fidelity of VitaProof®. This makes Vita LongRange Kit the ideal choice for the amplification of long targets e.g. for sequencing.

Product	Size	SKU
Vita LongRange Kit	100 rxn / 50 µl	PCCSKU1013
	200 rxn / 50 µl	PCCSKU1014
	500 rxn / 50 µl	PCCSKU1015



Vita LongRange Kit was used to amplify a 4 kb target sequence with a serial dilution of template DNA (5 to 0.04 ng / rxn). Even with only 40 pg of template, a specific and correct amplicon was obtained.

Vita High Fidelity Kit



Vita High Fidelity Kit provides an increased level of fidelity in comparison to PCR with a regular Taq polymerase. It contains a blend of Taq and proofreading polymerase that is highly processive and - at the same time - capable of correcting amplification errors. That makes it 5 times more precise than reagents with Taq polymerase alone.

Vita High Fidelity reagents are a reasonable option when extra precision is required, e.g. in sample preparation for sequencing or cloning.



Product	Size	SKU
Vita High Fidelity Kit	100 rxn / 50 µl	PCCSKU1024
	200 rxn / 50 µl	PCCSKU1025

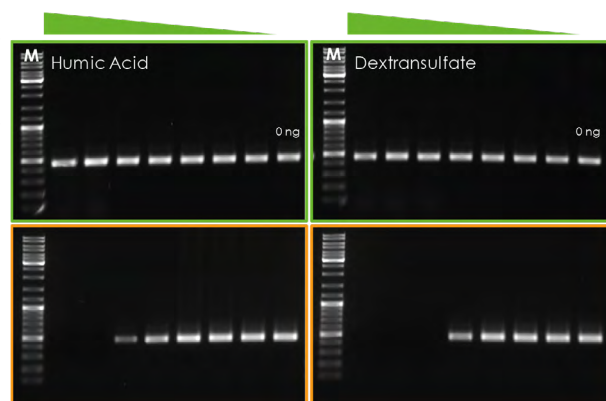
Vita Plant Kit



Vita Plant Kit was developed and optimized for the challenging analysis of plant derived samples in endpoint PCR. Be it DNA isolates from plant sources or PCR from crude plant extract, Vita Plant Kit provides convenient solutions for your application.

It provides:

- Efficient & highly specific target amplification
- Fast analysis from crude extracts
- Superior resistance against plant-derived inhibitors
- Additional 10X Plant Enhancer for extra-persistent samples
- Convenient 2X mastermix formulation



VitaPlant Kit was used to amplify a 500 bp target sequence in the presence of an increasing concentration of humic acid and dextran sulfate (up to 200 ng / µl). **VitaPlant Kit** could successfully amplify the target sequence even at the highest tested concentration while a **competitor product** showed a loss in performance at higher concentrations.

Product	Size	SKU
Vita Plant Kit	2 ml	PCCSKU1022
	5 ml	PCCSKU1023

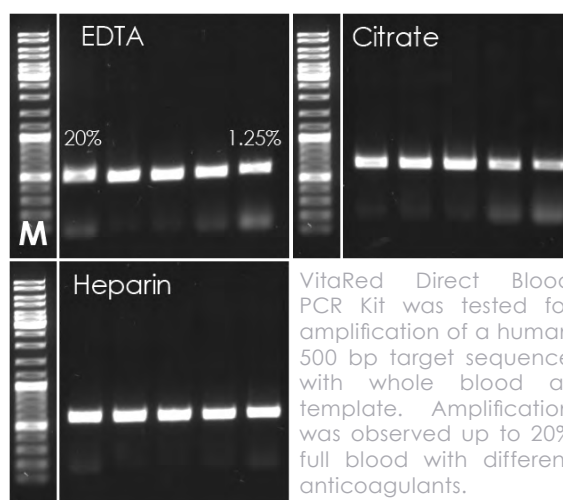
VitaRed Direct Blood PCR Kit



VitaRed Direct Blood PCR Kit was designed to amplify your target sequence directly from whole blood without previous DNA isolation. This does not only save time but also makes working more convenient since it requires only a minimal sample size (e.g. max 10 µl in 50 µl rxn).

The kit contains a highly specialized high-fidelity polymerase that can cope with up to 20% of whole blood per reaction while providing efficient amplification and superior precision. This makes VitaRed Direct Blood PCR Kit the perfect choice if you would like to sequence your amplicons or use them for cloning.

VitaRed Direct Blood PCR Kit can work with fresh blood and blood supplemented with heparin, citrate and EDTA. MgCl₂ is provided if your application requires further optimization.



Product	Size	SKU
VitaRed Direct Blood PCR Kit	100 rxn / 50 µl	PCCSKU1038
	500 rxn / 50 µl	PCCSKU1039

VitaProof® PCR Kit



VitaProof® is a high-fidelity proofreading DNA polymerase that (additionally to the 5'-3' polymerase activity) exhibits a 3'->5' exonuclease activity. This feature allows the removal of falsely incorporated nucleotides making VitaProof® PCR Kit the ideal choice for applications that require an elevated level of fidelity in comparison to VitaTaq® DNA polymerase (10X Taq).

Product	Size	SKU
VitaProof® PCR Kit	250 units	PCCSKU1016
	500 units	PCCSKU1017
	2500 units	PCCSKU1018



DID YOU KNOW?



We do not only develop polymerases but also our own **HotStart antibody**! It is an artificial designer protein that blocks polymerase even more efficiently than other commercially available antibodies. It is not only useful for PCR but also for Western Blots and ELISA applications!

Product	Size	SKU
HotStart Antibody (mouse)	250 units	PCCSKU1019
	1000 units	PCCSKU1020

Indominus™ Ultra-Fi PCR Kit



Our recently developed Indominus™-Polymerase is a next-generation designer proofreading polymerase that combines exceptional speed and efficiency with a high amplification fidelity. It is an allround talent for many applications but especially recommended for high fidelity applications like cloning or NGS. In contrast to well-known market-leading products, Indominus™ is no Sso7D-fusion protein but a whole new generation of proofreading polymerase.

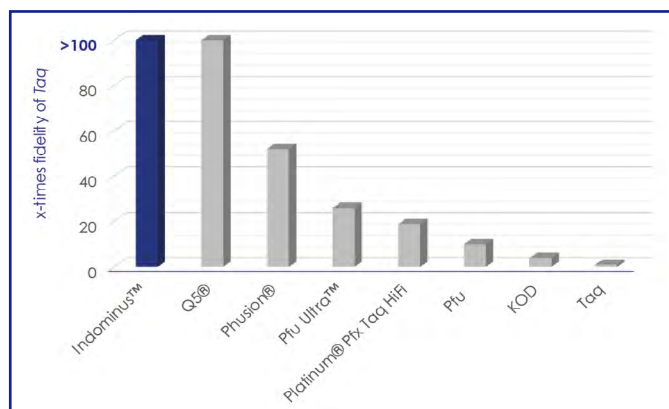
The kit comes with a **50X Enzyme Solution** and **2 different 5X buffers** including dNTPs to fit all applications.

LongRange PCR



Indominus™ (1) was tested in direct comparison to the gold-standard enzymes Phusion® (ThermoFisher) and Q5® (NEB) and wildtype *Pfu*-polymerase (4) for amplification of a 4 kb and 6 kb amplicon. All enzymes were tested in their respective buffers under their optimal conditions. PCR was run with 1 ng template / 25 µl rxn for 30 cycles

Fidelity

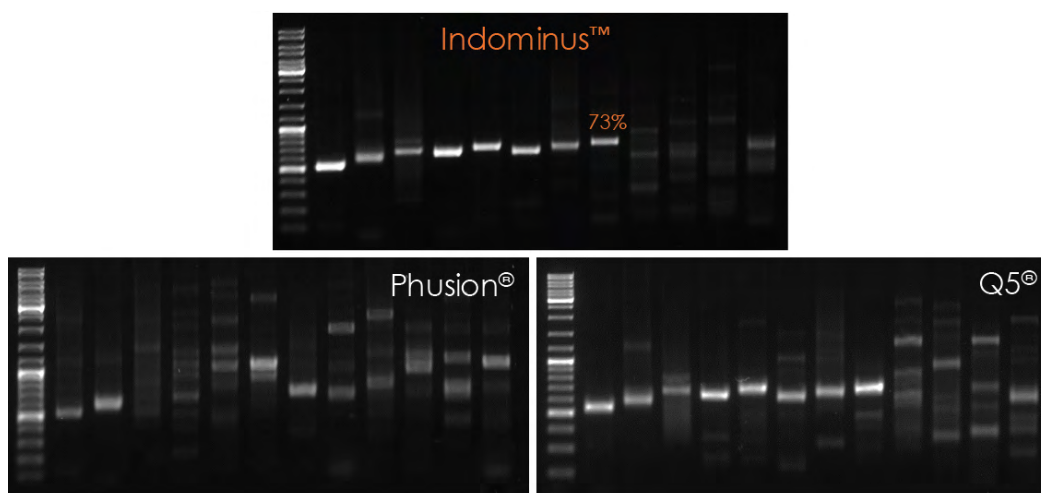


Fidelity of Indominus™ was determined with a sequencing based approach and found to be

>100 X the fidelity of Taq polymerase.

Fidelity data for other suppliers were plotted according to the manufacturer's data.

GC-Rich PCR



Indominus™ was tested for GC-rich PCR performance with a set of 12 primers for hgDNA. Sequences were selected for a length of 500 to 850 bp and a GC-content of 45% to 80%. PCR was run for 40 cycles with 20 ng hgDNA / rxn as template and 2 U enzyme / 25 µl rxn. For evaluation, Phusion® (ThermoFisher) and Q5® (NEB) were tested in the same assay with their respective GC-buffer or enhancer und identical conditions.

Product	Size	SKU
Indominus™ PCR Kit	100 rxn / 50 µl	PCCSKU1040
	500 rxn / 50 µl	PCCSKU1041

Real-Time PCR

2X Magic SYBR & Probe Mix

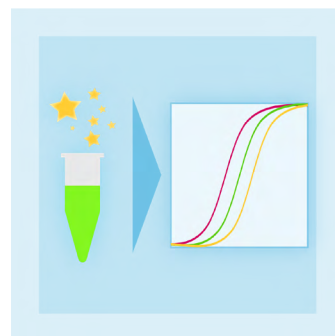
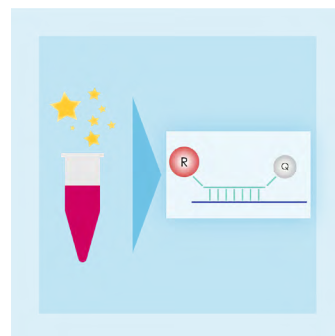


2X Magic SYBR & Probe Mix are allround-qPCR reagents optimized for a broad range of applications.

They include:

- a HotStart feature for maximum control over the reaction start
- a dUTP/dTTP blend to eliminate amplicon carry-over contamination
- a universal ROX concentration suitable for all common cyclers
- improved performance in the presence of PCR inhibitors

While 2X Magic SYBR Mix is used for dye-based detection, 2X Magic Probe Mix was developed for use with probe-based applications. Here, the amplification signal comes from hydrolyzation of a fluorescence-labeled probe upon amplification of the target sequence. While dye-based detection is more cost-effective, probe-based assays usually offer a way higher specificity and is more sensitive. The choice is dependent on your application.

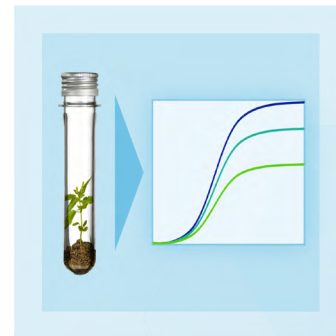
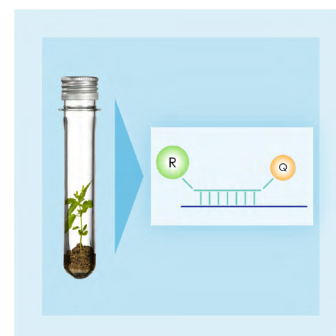


Product	Size	SKU
2X Magic SYBR Mix	2 ml	PCCSKU1107
	5 ml	PCCSKU1108
2X Magic Probe Mix	2 ml	PCCSKU1109
	5 ml	PCCSKU1110

2X ProPlant SYBR & Probe Mix



2X ProPlant SYBR & Probe Mix are qPCR reagents developed specifically for the use with plant-derived samples. While containing all the best features from our „Magic“-qPCR reagents such as high sensitivity, the dTTP/dUTP blend etc. they also exhibit superior resistance against plant-based inhibitors such as tannic acid, humic acid etc. Some inhibitors stick with your samples even after isolation of the DNA and then disturb your analysis. For these candidates, 2X ProPlant Mix SYBR and Probe are an alternative to standard qPCR reagents. 2X ProPlant SYBR Mix is used for dye-based detection, 2X ProPlant Probe Mix is used for probe-based applications.



Product	Size	SKU
2X ProPlant SYBR Mix	2 ml	PCCSKU1101
	5 ml	PCCSKU1102
2X ProPlant Probe Mix	2 ml	PCCSKU1103
	5 ml	PCCSKU1104

Reverse Transcription

VitaScript™ FirstStrand cDNA Synthesis Kit



VitaScript™ FirstStrand cDNA Synthesis Kit is a set of reagents for transcription of RNA template into cDNA. This step is often found in gene expression analysis where whole RNA pools are transcribed and then subsequently analyzed in quantitative PCR.

Performing reverse transcription in a separate step is recommended if

- you want high flexibility in your reaction setup
- you want to analyze rare targets: the use of random primers increases template coverage
- you want high sensitivity: longer reverse transcription protocols allow for a more complete coverage of the RNA pool
- you want to store the cDNA library for further studies



Product	Size	SKU
VitaScript™ FirstStrand cDNA Synthesis Kit	50 rxn	PCCSKU1301

VitaScript™ 1Step RT-PCR Kit



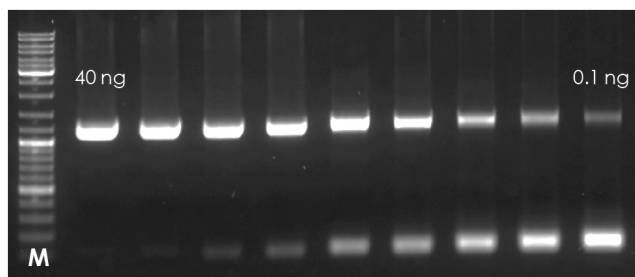
VitaScript™ 1Step RT-PCR Kit is a combined solution for reverse transcription and subsequent endpoint PCR analysis, both reactions happen in one tube during one experiment.

VitaScript™ 1Step RT-PCR Kit is right for you if

- you analyze long amplicons
- you need high fidelity for downstream applications
- you need the amplicons for further analysis

For total control over the reaction start, VitaScript™ 1Step RT-PCR Kit works with a 2-Phase HotStart feature: polymerase and reverse transcriptase are only activated upon heating of the sample granting superior specificity.

VitaScript™ 1Step RT-PCR Kit produces highly specific transcripts with as little as 0.1 ng of total RNA input per reaction.



VitaScript™ 1Step RT-PCR Kit was tested in a dilution series from 40 ng RNA to 0.1 ng RNA per reaction for detection of a 1.2 kb target sequence. The sequence could be amplified specifically in all reactions. Depending on primer and template sequence, detection is possible down to 1 fg of total RNA input.

Product	Size	SKU
VitaScript™ 1Step RT-PCR Kit	25 rxn / 50 µl	PCCSKU1302
	100 rxn / 50 µl	PCCSKU1303

1Step Magic SYBR & Probe Kit

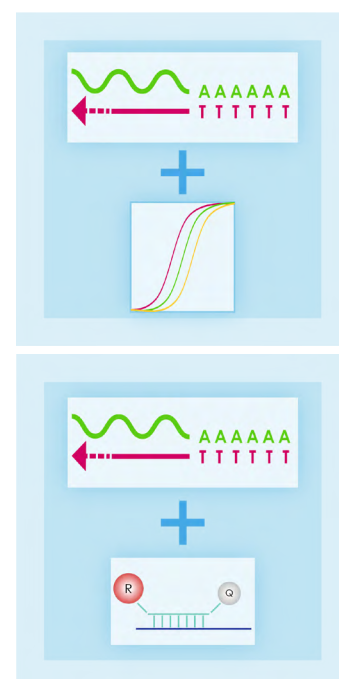


The 1Step Magic SYBR & Probe Kits were optimized to allow reverse transcription and real-time PCR analysis to take part in one reaction saving time and minimizing handling steps. 1Step Magic SYBR Kit works with dye-based detection while 1Step Magic Probe Kit uses probe-based detection.

Performing 1Step analysis is recommended if

- you are screening a high sample number
- you are only interested in few target sequences
- you want a more accurate representation of copy numbers
- do not need to stock the cDNA

Product	Size	SKU
1Step Magic SYBR Kit	200 rxn / 20 µl	PCCSKU1201
	600 rxn / 20 µl	PCCSKU1202
1Step Magic Probe Kit	200 rxn / 20 µl	PCCSKU1203
	600 rxn / 20 µl	PCCSKU1204



Test Samples & Custom Solutions

Still not sure, which reagent is right for you?

Feel free to contact our team of experts. We are happy to assist you to make your experiment a success! If you would like to try before you buy, get yourself some free test samples of any product from the catalogue.

If your application is way more unique than we could anticipate (maybe you use a unique kind of sample or specialized method?) or you have other unique requirements (pre-aliquoted reagents, bulk orders), let us know and get a quote for a customized product.

We are always happy to develop unique solutions in cooperation & love a good challenge!

Contact & Ordering



QUALITY WITHOUT COMPROMISE

Procomcure Biotech GmbH
Breitwies 1
5303 Thalgau
AUSTRIA

www.procomcure.com
office@procomcure.com



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