# PCR Consumables



#### GUIDELINES FOR USE

# PCR Plate

qPCR plate is a popular laboratory disposable consumable widely used in applications related to medicine, genetics, immunity, biochemistry, and other fields for, cloning, nucleic acid sequence analysis, the diagnosis of diseases, or any research with DNA or RNA. PakGent® PCR plates are designed to fit many popular thermocyclers including brands like ABI/Biorad/ Roche/Eppendorf/Agilent/Bioer/Abbott etc. All our PCR disposables are made from 100% virgin polypropylene.



Classification	Description
Material	• PP.
Skirt	• Non-skirt, Half skirt, Sub semi-skirt or High-skirt, Full-skirt PCR plate.
Well quantity	• 96 well PCR plate/384 well PCR plate.
Color	• White/clear.
Size	• 40ul/0.1ml/0.2ml PCR plate.

#### Verify color selection

PCR tubes and plates are often available in a variety of colors to facilitate visual organization and identification of samples, especially for highthroughput experiments. Although the color of the plastic has no impact on DNA amplification, in setting up reactions for real-time PCR or qPCR, white plastics may be recommended over clear to enable sensitive and accurate fluorescence detection. Users should follow recommendations of the qPCR instrument manufacturer for color considerations.



Note that ultraclear caps or optical seals should be used to seal qPCR tubes and plates in order to enhance sensitivity and reduce variability, since they are specifically designed to allow passage of fluorescence signals without interference.



White plastics improve the sensitivity and consistency of qPCR data by preventing fluorescence refraction out of the tube. With refraction being minimized, more signal is reflected back to the detector, increasing the signal-to-noise ratio. In addition, the white wall minimizes variation across technical replicates by preventing transmission of fluorescence signals to the thermal cycler block where it can be absorbed or inconsistently reflected. On rare occasions, where the fluorescence detector is oversaturated from increased signal reflection of the white well, frosted wells may be a better alternative.



As shown above, White wells prevent refraction of fluorescence signals and their absorption by the thermal block in qPCR experiments. White plates reflect significantly more signal than clear plates. Three dilutions of fluorescein were added to the plates for comparison.

#### **Skirt selection**





A **non-skirted** plate lacks the surrounding panel. This format fits blocks of most thermal cyclers and real-time PCR instruments, but it is not suitable for robotic applications.

A **semi-skirted** plate has a short panel around the edge of the plate, providing adequate support during pipetting and mechanical strength for robotic handling.



A **full skirted** PCR/qPCR plate has a full-height panel surrounding the plate. This plate format is designed to fit securely over a thermal cycler with a raised block (which facilitates robotic

handling). The full skirt also enhances mechanical strength, making it excellent for use with robotic platforms in an automated workflow.

> Raised well rims ensure optimal sealing and prevent evaporation

White/black letters, easy to read alphanumeric indexing

Ultra thin design for optimal temperature transfer

Part No.	Skirt	Option	Colour	Identifcation Color	Pack
PCRP-20NS	Non-skirt	0.2ml 96-well	clear		10/box, 10boxs/case
PCRP-10NS	Non-skirt	0.1ml 96-well	clear		10/box, 10boxs/case
PCRP-20NS-W	Non-skirt	0.2ml 96-well	white		10/box, 10boxs/case
PCRP-10NS-W	Non-skirt	0.1ml 96-well	white		10/box, 10boxs/case
PCRP-20HS	Half skirt	0.2ml 96-well	clear		10/box, 10boxs/case
PCRP-20HS-W	Half skirt	0.1ml 96-well	white		10/box, 10boxs/case
PCRP-10HSR	Half skirt	0.1ml 96-well	clear		10/box, 10boxs/case
PCRP-10HSR-W	Half skirt	0.1ml 96-well	white		10/box, 10boxs/case
PCRP-20IS	Sub semi-skirt	0.2ml 96-well	clear		10/box, 10boxs/case
PCRP-10IS	Sub semi-skirt	0.1ml 96-well	clear		10/box, 10boxs/case
PCRP-10FS	Full-skirt	0.1ml 96-well	white base, clear wells		10/box, 10boxs/case
PCRP-10FS-W	Full-skirt	0.1ml 96-well	white base, white wells		10/box, 10boxs/case
PCRP-20FS	Full-skirt	0.2ml 96-well	white base, clear wells		10/box, 10boxs/case
PCRP-20FS-W	Full-skirt	0.2ml 96-well	white base, white wells		10/box, 10boxs/case
PCRP-40FS-384C	Full-skirt	40µL384-well	white base, clear wells		10/box, 10boxs/case
PCRP-40FS-384C-W	Full-skirt	40µL384-well	white base, white wells		10/box, 10boxs/case

Note: Letter printing color ( 🗖 black 🔲 white ). Please note identification color when placing order



#### PCR Tube

Individual tubes provide the flexibility of setting up the exact number of reactions to run.

8-Strip PCR Tubes with separate or attached caps. Designed to work with both single-channel and multi-channel pipettes, tube strips are suitable for low- and medium-throughput experiments. Those with attached caps offer the option of opening and closing the tubes independently to prevent sample contamination.





Part No.	Option	Color	Pack
PCRS-20F	0.2ml 8-Strip	clear tube	125/unit, 10units/case
PCRS-20F-W	0.2ml 8-Strip	white tube	125/unit, 10units/case
PCRS-10F	0.1ml 8-Strip	clear tube	125/unit, 10units/case
PCRS-10F-W	0.1ml 8-Strip	white tube	125/unit, 10units/case
PCRT-20F	0.2ml Individual tube	clear tube	1,000/unit, 10units/case

#### PCR Sealing Film (works for all kinds of plates)

Polyester seals feature a strong adhesive to minimize evaporation during PCR and storage applications.

- Ideal for PCR & storage
- Certified Dnase and Rnase free
- Temperature range is -40 to +120 °C
- Minimizes evaporation

Part No.	Color	Pack
PCRF-C	clear	100/unit







# **PCR Plate Selection Guide**

✓ = Compatible	✓ = Recommended		PCR 8 StripTube				PCR Tube						PCR Plate					
		rart No.	PCRS-10F	PCRS-10F-W	PCRS-20F	PCRS-20F-W	PCRT-20F	PCRP-20NS	PCRP-20NS-W	PCRP-10NS	PCRP-10NS-W	PCRP-10HSR	PCRP-10HSR-W P	PCRP-20HS	PCRP-20HS-W	PCRP-20IS	PCRP-10IS	PCRP-10FS
Brand	Product	2	PCI	PCI	PCI	PCI	PCI	PC	PCI	PCI	PCI	PCI	PCI	PCI	PCI	PCI	PCI	PCI
	StepOnePlus™ qPCR system		<ul> <li>Image: A start of the start of</li></ul>	$\checkmark$												$\checkmark$		
	StepOne™ qPCR system			$\checkmark$														
	ViiA™7 fast qPCR 96*0.1ml			$\checkmark$												$\checkmark$		
	ViiA™7 qPCR system				$\checkmark$					$\checkmark$	$\checkmark$			$\checkmark$				
	7500 Fast qPCR system			$\checkmark$												$\checkmark$		
	7900HT Fast qPCR system			$\checkmark$													$\checkmark$	
	7500 qPCR system				$\checkmark$					$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$			
	7900HT qPCR system						$\checkmark$											
Applied biosystems/	QuantStudio™ 12k Flex Fast			$\checkmark$												$\checkmark$		
Life technologies	QuantStudio™ 12k Flex				$\checkmark$					$\checkmark$	$\checkmark$			$\checkmark$				
	7300 qPCR system				$\checkmark$					$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$		$\checkmark$	
	7000 ABI PRISM 7000 SDS				$\checkmark$					$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$		$\checkmark$	
	9700									$\checkmark$				$\checkmark$	$\checkmark$		$\checkmark$	
	QuantStudio <sup>®</sup> 3 \Q5\Q6\Q7				$\checkmark$					$\checkmark$	$\checkmark$			$\checkmark$				
	QuantStudio® 3 \Q5\Q6\Q7fast			$\checkmark$												$\checkmark$		
	Veriti 96-Well/Veriti™ Dx 96-Well				$\checkmark$					$\checkmark$	$\checkmark$			$\checkmark$				
	Veriti FAST 96-Wel/Veriti™ Dx FAST			$\checkmark$												$\checkmark$		
	SimpliAmp™				$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$		$\checkmark$	
	CFX96 Touch		$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$							$\checkmark$
	CFX96 Touch Deepwell				$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$							
	iQ5 Real-Time PCR				$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$							
	iQ Real-Time PCR				$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$							
	MyiQ Real-Time PCR				$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$							
	MyiQ2 Real-Time PCR				$\checkmark$	$\checkmark$												
	Opticon 2			$\checkmark$				$\checkmark$	$\checkmark$									$\checkmark$
	CFX connect			$\checkmark$				$\checkmark$	$\checkmark$									
Bio-Rad Laboratories	T100 pcr		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$							$\checkmark$
Edbordtories	icycler				$\checkmark$					$\checkmark$	$\checkmark$							
	C1000/ C1000 Touch		$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$							$\checkmark$
	DNA Engine		$\checkmark$	$\checkmark$	$\checkmark$					$\checkmark$	$\checkmark$							
	MiniOpticon		$\checkmark$	$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$	$\checkmark$							
	MJ Mini		$\checkmark$	$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$	$\checkmark$							
	PTC-100		$\checkmark$	$\checkmark$	$\checkmark$					$\checkmark$	$\checkmark$							
	S1000		$\checkmark$	$\checkmark$	$\checkmark$					$\checkmark$	$\checkmark$							
	iCycler 0.2ml*48 0.2ml*96				$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$							



## PCR Plate Selection Guide (cont.)

✓ = Compatible	✓ = Recommended	PCR 8 StripTube			PCR Tube						PCR Plate						
Brand	o Z צ דיס ע דיס ע	PCRS-10F	PCRS-10F-W	PCRS-20F	PCRS-20F-W	PCRT-20F	PCRP-20NS	PCRP-20NS-W	PCRP-10NS	PCRP-10NS-W	PCRP-10HSR	PCRP-10HSR-W	PCRP-20HS	PCRP-20HS-W	PCRP-20IS	PCRP-10IS	PCRP-10FS
	Mastercycler ep realplex							$\checkmark$	$\checkmark$	$\checkmark$							
	Mastercycler nexus /nexus eco GSX1			$\checkmark$					$\checkmark$	$\checkmark$							
	Mastercycler ep gradient		$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$	$\checkmark$							
Eppendorf	Mastercycler pro/pro S	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$	$\checkmark$								
	Thermomixer C	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$					
	Thermomixer comfort	$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$	$\checkmark$								
	Mastercycler gradient			$\checkmark$					$\checkmark$	$\checkmark$							
	SLAN-48P 48			$\checkmark$					$\checkmark$								
HongShi	SLAN-96P 2*48			$\checkmark$					$\checkmark$								
	SLAN-96S			$\checkmark$					$\checkmark$				$\checkmark$	$\checkmark$			
	Cobas z480		$\checkmark$					$\checkmark$			$\checkmark$	$\checkmark$					
	LightCycler <sup>®</sup> 480 System 384-well		$\checkmark$					$\checkmark$			$\checkmark$	$\checkmark$					
Roche	LightCycler <sup>®</sup> 480 System		$\checkmark$					$\checkmark$			$\checkmark$	$\checkmark$					
	LightCycler <sup>®</sup> 96 System		$\checkmark$					$\checkmark$			$\checkmark$	$\checkmark$					
	LightCycler <sup>®</sup> Nano		$\checkmark$					$\checkmark$			$\checkmark$	$\checkmark$					
Abbott	m2000rt			$\checkmark$	$\checkmark$												
	Mx3000PTM			$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$			
	Mx3005PTM			$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$							
Agilent/Stratagena	M×4000TM			$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$							
	Agilent AriaMX		$\checkmark$					$\checkmark$									
	SureCycler 8800 thermal cycler			$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$							
	Toptical		$\checkmark$					$\checkmark$									
	qTower			$\checkmark$	$\checkmark$				$\checkmark$	$\checkmark$							
	Tone96/96G				$\checkmark$				$\checkmark$	$\checkmark$							
Analytik	Alpha SC 0.2ml*96 0.2ml*48 0.2ml*48*2				$\checkmark$			$\checkmark$	$\checkmark$	$\checkmark$							
Jena/Biometra	FlexCycler 0.2ml*96 0.2ml*48							$\checkmark$	$\checkmark$	$\checkmark$							
	TRIO48 0.2ml*48				$\checkmark$												
	TRIO Combi 0.2ml*48				$\checkmark$				$\checkmark$	$\checkmark$							
	SpeedCycler 36			$\checkmark$	$\checkmark$												



## PCR Plate Selection Guide (cont.)

🗹 = Compatible	✓ = Recommended		PCR 8 StripTube			PCR Tube						PCR Plate					
Brand	Product	DEPC 10E	PCRS-10F-W		PCRS-20F-W	PCRT-20F	PCRP-20NS	PCRP-20NS-W	PCRP-10NS	PCRP-10NS-W	PCRP-10HSR	PCRP-10HSR-W	PCRP-20HS	PCRP-20HS-W	PCRP-20IS	PCRP-10IS	PCRP-10FS
	Line-Gene I/Mini 16				3				<b>~</b>								
	Line-Gene K48																
	Line-Gene 3310/3320					_											
	Line-Gene 9600																
	Line-Gene 9600plus																
Bioer	GenePro B		1														
Bioch	Life ECO Thermal Cycler																
	Life Express TC-96/T/H(a) TC-48/H(t)		-														
	LifeProTC-96/G/H(b)A								$\checkmark$								
	LifeTouch TC-96/G/H(b)B		1		]				$\checkmark$								
	XPcycler TC-XP				1												
	Gentier								$\checkmark$	$\checkmark$							
Xian Tianlong	96E			1			$\checkmark$	$\checkmark$									
Science	DTC-4			1			$\checkmark$	$\checkmark$									
	DTC-4G			1			$\checkmark$	$\checkmark$									
	Thermal Cycler Dice TP600		1	1			$\checkmark$	$\checkmark$	$\checkmark$								
TaKaRa Bio Inc	Thermal Cycler Dice TP650						$\checkmark$	$\checkmark$	$\checkmark$								
Τάκακά βιο πο	Thermal Cycler Dice TP850								$\checkmark$								
	Thermal Cycler Dice TP870								$\checkmark$								
	A100						$\checkmark$	$\checkmark$									
	A200						$\checkmark$	$\checkmark$									
	Gradient PCR		_														
LongGene	L Series 96						$\checkmark$										
	Multi-Purpose PCR																
	MyGeneTM PCR																
	Q2000C						$\checkmark$	$\checkmark$									



