



# Hypertension Detection Solution

(PCR-Melting Curve Method)

Hypertension is one of the most important independent risk factors for cardiovascular and cerebrovascular diseases. In hypertension treatment, patients might exhibit variable drug responses attributable to genetic polymorphisms within genes that regulate drug-related metabolic enzymes and receptors.

This kit adopts the principle of the PCR melting curve method for qualitative detection of seven hypertension pharmacogenetic-related gene loci, including CYP2D6\*10, CYP2C9\*3, ADRB1 (c.1165 G>C), AGTR1 (c.1166 A>C), ACE (I/D), NPPA (c.2238 T>C) and CYP3A5\*3 in DNA extracted from the peripheral blood of hypertensive patients. It can guide rational medication to control blood pressure and lower the risk of cardio-cerebrovascular diseases.

Technique	PCR-Melting Curve Method	
Coverage	CYP2D6*10	✓
	CYP2C9*3	✓
	ADRB1 (c.1165 G>C)	✓
	AGTR1 (c.1166 A>C)	✓
	ACE (I/D)	✓
	NPPA (c.2238 T>C)	✓
	CYP3A5*3	✓

## FEATURES



### Reliable Detection

Capturing information of seven hypertension pharmacogenetic-related genetic loci, including CYP2D6\*10, CYP2C9\*3, ADRB1 (c.1165 G>C), AGTR1 (c.1166 A>C), ACE (I/D), NPPA (c.2238 T>C) and CYP3A5\*3



### Excellent Performance

Based on the PCR melting curve method, operating process is easier and multiple genotyping test results can be interpreted at one time.



### Providing Integrated Solution

Providing integrated solution including reagents and instruments to optimize your workflow



### Internal Control

The use of internal control can effectively prevent false negative results



### High Precision

The T<sub>m</sub> value range is  $\leq 1.5$  °C

## TARGET GENE LOCI AND PHENOTYPES

Gene Locus	Genotype	Phenotype	Classification	Example of Medication
ADRB1 (c.1165 G>C)	GG	Normal sensitivity	β-adrenergic receptor blocker	Metoprolol Carvedilol Alprenolol Labetalol
	GC	Relatively high sensitivity		
	CC	High sensitivity		
CYP2D6*10	CC	Normal metabolic capacity		
	CT	Relatively weak metabolic capacity		
	TT	Weak metabolic capacity		
AGTR1 (c.1166 A>C)	AA	Normal sensitivity	Angiotensin II receptor inhibitor	Losartan Irbesartan Candesartan Valsartan
	AC	Relatively high sensitivity		
	CC	High sensitivity		
CYP2C9*3	AA	Normal losartan activation ability; Normal ARB metabolic capacity	Angiotensin II receptor inhibitor	Losartan Irbesartan Candesartan Valsartan
	AC	Relatively weak losartan activation ability; Relatively weak ARB metabolic capacity		
	CC	Weak losartan activation ability; Weak ARB metabolic capacity		
ACE (I/D)	II	Normal enzymatic activity	Angiotensin-converting enzyme inhibitors	Benazepril Fosinopril Enalapril Perindopril Ramipril
	ID	Relatively high enzymatic activity		
	DD	High enzymatic activity		
NPPA (c.2238 T>C)	TT	Normal enzymatic activity	Calcium antagonists	Nifedipine Felodipine Lacidipine Amlodipine Cilnidipine
	TC	Relatively low enzymatic activity		
	CC	Low enzymatic activity		
CYP3A5*3	AA	Normal metabolic capacity		
	AG	Relatively weak metabolic capacity		
	GG	Weak metabolic capacity		
NPPA (c.2238 T>C)	TT	Normal sensitivity	Diuretic	Chlorothiazide Hydrochlorothiazide Bendroflumethiazide Chlorthalidone
	TC	Relatively high sensitivity		
	CC	High sensitivity		

## CLINICAL SIGNIFICANCE

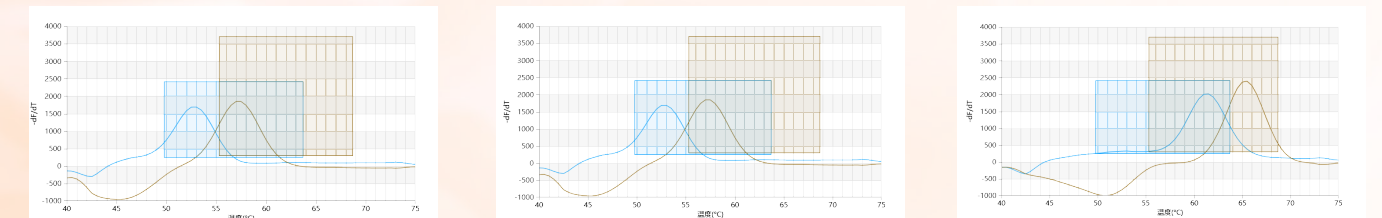


Suitable for patients with common hypertension, guiding rational medication to control blood pressure and lower the risk of cardio-cerebrovascular diseases.

## ORDERING INFORMATION

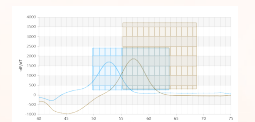
<b>Product Name</b>	CYP2D6*10 \ CYP2C9*3 \ ADRB1 (1165 G>C) \ AGTR1 (1166 A>C) \ ACE (I/D) Detection Kit (PCR-Melting Curve Method)		NPPA (2238 T>C) \ CYP3A5*3 Detection Kit (PCR-Melting Curve Method)	
<b>Cat.No</b>	PI29H	PI57H	PI62H	PI63H
<b>Specification</b>	24T/Kit	48T/Kit	24T/Kit	48T/Kit
<b>Target Gene Loci</b>	CYP2D6*10 CYP2C9*3 ADRB1 (c.1165 G>C) AGTR1 (c.1166 A>C) ACE (I/D)		NPPA (c.2238 T>C) CYP3A5*3	
<b>Specimen</b>	Human peripheral blood			
<b>Storage &amp; Validity</b>	-25°C~-15°C for 12 months			
<b>Applicable Equipment</b>	Instruments with FAM and ROX fluorescence channels, such as Tianlong Gentier Real-time PCR Systems, Applied Biosystems™ 7500 Real-Time PCR Systems.			

## GENE POLYMORPHISM



\*The diagram shows only partial detection results and please refer to IFU for more detailed interpretation of gene polymorphism.

## ASSAY WORKFLOW



Version 1.0

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**Tianlong Science and Technology**

Mail: inquiry@medtl.com  
Phone: +86-29-82682132

Website: www.medtl.net

Address: No. 4266 Shanglin Road, Xi'an, China