

Table SI. Detailed information about the primers in the two-reaction system.

Name	Sequence
3F	5'-(Biotin)-CCGGTCGCCTTGTCCCCCA-3'
3R	5'-GCAAACTCTACCGTCCAGCG-3'
2R	5'-AGACCAGGAACCCGAGGTG-3'
4F	5'-(Biotin)-GGAATACCCATGTCCTGCCTC-3'
4R	5'-GGCGAAGGATCTTCTCACCTTT-3'
SF	5'-(Biotin)-GGGCGATCTCTGTGAACTC-3'
SR	5'-AGGGCACGTTGTCATGTTGGC-3'
HB1	5'-(Biotin)-CCAATTGGTCTACTCCAGGG-3'
HB2	5'-TCACCTCTTCCTATCACAAGA-3'
HB3	5'-(Biotin)-ATCCGCCAATGCACCACCCT-3'
HB4	5'-TGCTCAAACCCCGCATTAT-3'

Table SII. Detailed information about the probes on the hybridization membrane strips.

Probe	Sequence
α -thalassemia	
NP(α 2)	5'-NH ₂ -TACCGTTAAGCTGGAGCCT-3'
3P(α 3.7)	5'-NH ₂ -GGGATTTAACTCAACAGGC-3'
SP(SEA)	5'-NH ₂ -CCCGCTCAGCCTACTTGC-3'
4P(α 4.2)	5'-NH ₂ -TGGCACAAAGGCCGACAG-3'
CSN	5'-NH ₂ -TACCGTTAAGCTGGAGC-3'
QSN	5'-NH ₂ -ACCGTGCTGACCTCCA-3'
CSM	5'-NH ₂ -ATACCGTCAAGCTGGAG-3'
QSM	5'-NH ₂ -CGTGCCGACCTCCAAA-3'
β -thalassemia	
CD41-42-43-N	5'-NH ₂ -CAGAGGTTCTTTGAGTCCT-3'
CD41-42-M (-TTCT)	5'-NH ₂ -CCAGAGGTTGAGTCCTTT-3'
CD43-M (G>T)	5'-NH ₂ -AGGTTCTTTTAGTCCTTTG-3'
CD14-15-17-N	5'-NH ₂ -CTGCCCTGTGGGGCAAGGT-3'
CD17-M (A>T)	5'-NH ₂ -TGTGGGGCTAGGTGAACGTG-3'
CD14-15M (+G)	5'-NH ₂ -GTACTGCCCTGGTGGGGCAA-3'
IVSII-654-N	5'-NH ₂ -GGTTAAGGCAATAGCAATAG-3'
IVSII-654-M (C>T)	5'-NH ₂ -AGGTTAAGGTAATAGCAATAG-3'
-28/29-N	5'-NH ₂ -GGCTGGGCATAAAAAGTCAGG-3'
-28-M (A>G)	5'-NH ₂ -CTGGGCATGAAAGTCAGG-3'
-29-M (A>G)	5'-NH ₂ -CTGGGCATAGAAGTCAG-3'
CD71-72-N	5'-NH ₂ -GTGCCTTTAGTGATGGCC-3'
CD71-72-M (+A)	5'-NH ₂ -GTGCCTTTAAGTGATGGC-3'
β E-N	5'-NH ₂ -TGAAGTTGGTGGTGAGG-3'
β E-M (G>A)	5'-NH ₂ -AGTTGGTGGTAAGGCC-3'
IVSI-1-M (G>A)	5'-NH ₂ -GGGCAGATTGGTATCAAG-3'
IVSI-1-M (G>T)	5'-NH ₂ -CTGGGCAGTTTGGTATCA-3'
IVSI-5-M (G>C)	5'-NH ₂ -TGGCAGGTTGCTATCAAG-3'
CD27-28-M (+ C)	5'-NH ₂ -AGGCCCTGGGCAGGT-3'
InitM (ATG>AGG)	5'-NH ₂ -ACAGACACCAGGGTGCATCT-3'
CAPM (-AAAC)	5'-NH ₂ -TAGCAACCTCAGACACCATG-3'
CD 31-N	5'-NH ₂ -CCTTAGGCTGCTGGTG-3'
CD31-M (-C)	5'-NH ₂ -CCTTAGGTGCTGGTGGT-3'

Table SIII. Thalassemia gene primers for PCR and sequencing.

Gene		Sequence, 5'-3'	Product size, bp
$\alpha 2$ globin gene	L	TCCCCACAGACTCAGAGAGAACC	880
	D	AACACCTCCATTGTTGGCACATTCC	
$\alpha 1$ globin gene	L	TCCCCACAGACTCAGAGAGAACC	880
	A	CCATGCCTGGCACGTTTGCTGAG	
β globin gene (exon 1-2)	$\beta 1$	GTACGGCTGTCATCACTTAGACCTCA	600
	$\beta 2$	TGCAGCTTGTCACAGTGCAGCTCACT	
β globin gene (exon 3)	$\beta 3$	GTGTACACATATTGACCAAA	422
	$\beta 4$	AGCACACAGACCAGCACGTT	