

**A**

The figure displays a genetic map of the Cb genome, organized into 12 chromosomes labeled Cb1 through Cb12. A vertical scale on the left indicates genomic positions from 0 Mb at the top to 300 Mb at the bottom, with major tick marks every 50 Mb. Each chromosome is represented by a vertical bar, with individual genes mapped along its length. Gene names are written next to their corresponding locations on the chromosomes. The distribution of genes varies significantly between chromosomes; for example, Cb1 contains many genes in the upper half, while Cb12 has a dense cluster of genes near the bottom. Some genes, like CbMYB89, are located on multiple chromosomes.

0 Mb  
50 Mb  
100 Mb  
150 Mb  
200 Mb  
250 Mb  
300 Mb

Cb1  
CbmYB44  
CbmYB104  
CbmYB3R-2  
CbmYB74  
CbKUA1  
CbARR6  
CbmYB81  
CbmYBR18-2  
CbmYBR18-1  
CbKAN1  
CbAPL3  
CbmYB17  
CbmYB20  
CbmYB89  
CbmYB40  
CbARR2  
CbARR12  
CbARR10  
CbmYB98  
CbPHR5-1  
CbmYB22  
CbmYBH4  
CbmYB22  
CbmEFM1  
CbmKUA3  
CbmYB54  
CbmPHR1  
CbmYB59  
CbmYB60  
CbmDIV2  
CbAPL1  
CbmYB85  
CbmYB1  
CbmRVE6  
CbmRL3  
CbmYB3  
CbmYB53  
CbmHHO1  
CbmYB24  
CbmYB77  
CbmYB33  
CbmYB92  
CbmYB40  
CbmYB38  
CbmYB8  
CbmSWI3A  
CbmYB5  
CbmYBR10-1  
CbmYBR10-2  
CbmYB45  
CbmYBR1  
CbmSRM2  
CbmMYBCDC  
CbmYB75  
CbAPL6

Cb2  
CbmYB85  
CbmYB1  
CbmRVE6  
CbmRL3  
CbmYB3  
CbmYB53  
CbmHHO1  
CbmYB24  
CbmYB77  
CbmYB33

Cb3  
CbmYB8  
CbmSWI3A  
CbmYB5  
CbmYBR10-1  
CbmYBR10-2  
CbmYB45  
CbmYBR1  
CbmSRM2  
CbmMYBCDC  
CbmYB75  
CbAPL6

Cb4  
CbmYB79  
CbmYB120-1  
CbmYB120-2  
CbmYB49  
CbmYB15  
CbmSWI3B

Cb5  
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CbmYB124  
CbmYB70  
CbmPHR5-2  
CbmPHR3-1  
CbmPHR3-4  
CbADA1  
CbmYB97  
CbARR1  
CbmYB13

Cb6  
CbmYB80  
CbmDIV3  
CbmTRF4-2  
CbmYB124  
CbmYB70  
CbmPHR5-2  
CbmPHR3-1  
CbmPHR3-4  
CbADA1  
CbmYB97  
CbARR1  
CbmYB13

Cb7  
CbmYB80  
CbmDIV3  
CbmTRF4-2  
CbmYB124  
CbmYB70  
CbmPHR5-2  
CbmPHR3-1  
CbmPHR3-4  
CbADA1  
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CbARR1  
CbmYB13

Cb8  
CbmYB80  
CbmDIV3  
CbmTRF4-2  
CbmYB124  
CbmYB70  
CbmPHR5-2  
CbmPHR3-1  
CbmPHR3-4  
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CbARR1  
CbmYB13

Cb9  
CbmYB80  
CbmDIV3  
CbmTRF4-2  
CbmYB124  
CbmYB70  
CbmPHR5-2  
CbmPHR3-1  
CbmPHR3-4  
CbADA1  
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CbARR1  
CbmYB13

Cb10  
CbmYB80  
CbmDIV3  
CbmTRF4-2  
CbmYB124  
CbmYB70  
CbmPHR5-2  
CbmPHR3-1  
CbmPHR3-4  
CbADA1  
CbmYB97  
CbARR1  
CbmYB13

Cb11  
CbmYB80  
CbmDIV3  
CbmTRF4-2  
CbmYB124  
CbmYB70  
CbmPHR5-2  
CbmPHR3-1  
CbmPHR3-4  
CbADA1  
CbmYB97  
CbARR1  
CbmYB13

Cb12  
CbmYB80  
CbmDIV3  
CbmTRF4-2  
CbmYB124  
CbmYB70  
CbmPHR5-2  
CbmPHR3-1  
CbmPHR3-4  
CbADA1  
CbmYB97  
CbARR1  
CbmYB13

CbMYB50  
CbMYB110  
CbMYB111  
CbMYB112  
CbPCL1  
CbMYB3  
CbKUA4  
CbRVE5  
CbmSWI3C  
CbmYB68  
CbmYB62  
CbmYB61  
CbmYB73-2  
CbmKAN4  
CbmYB80  
CbmDIV3  
CbmTRF4-2  
CbmYB124  
CbmYB70  
CbmPHR5-2  
CbmPHR3-1  
CbmPHR3-4  
CbADA1  
CbmYB97  
CbARR1  
CbmYB13  
CbmYB25  
CbmPHR2  
CbmYB30  
CbmYB99  
CbmYB89  
CbmYB35  
CbmDIV9  
CbmTRF2  
CbmYB85  
CbmYB119  
CbmYB1R-1  
CbmYB58  
CbARR4  
CbmYB105  
CbmYB103  
CbmPHR3-3  
CbmYB18-2  
CbmYB109  
CbmYB73-1  
CbmYB3R-1  
CbmYB47  
CbmYB102  
CbmEFM3  
CbmRAD2  
CbmRL1  
CbmSWI3D  
CbmYB21  
CbmYB121  
CbmYB31  
CbmYB65  
CbmYB83  
CbmYB63  
CbmYB64  
CbmGLK1  
CbmYB72  
CbmYB56-1  
CbmGLK2  
CbmYB84  
CbmYB42  
CbmYB86  
CbmLHY  
CbmDIV8  
CbmYB3R-5-1  
CbA  
CbmYB115  
CbmMYR2  
CbmYB29  
CbmTRF4-1  
CbmRVE3  
CbmMYR1  
CbmYB94  
CbmRAD4  
CbmPHR7  
CbmPHR6  
CbmPHR3-2  
CbmYB34  
CbmYB106  
CbmMYR3  
CbmYB11  
CbmYB90  
CbmYB91  
CbmYB4  
CbmYB1  
CbmYB15  
CbmYB12  
CbmYB14  
CbmRAD3  
CbAPL4  
CbmYB37  
CbmYB36  
CbARR3  
CbmYB76  
CbmDIV1  
CbmKUA2  
CbmYB15  
CbmYB12  
CbmYB14  
CbmRAD3  
CbAPL4  
CbmYB37  
CbmYB36  
CbARR3

**B**

0 Mb

50 Mb

100 Mb

150 Mb

200 Mb

250 Mb

300 Mb

350 Mb

Ca1

Ca2

Ca3

Ca4

Ca5

Ca6

Ca7

Ca8

Ca9

Ca10

Ca11

Ca12

CaMYB104

CaMYB44

CaMYB3R-2

CaMYB74

CaKUA1

CaARR6

CaMYB100

CaAPL3

CaMYB81

CaMYB82

CaKAN1

CaMYB20

CaMYBH4

CaMYB92

CaMYB32

CaMYB89

CaARR2

CaARR10

CaMYB40

CaMYB98

CaRL2

CaARR12

CaMYB17

CaMYB103

CaMYB105

CaMYB119

CaMYB1R-1

CaMYB58

CaMYB5

CaMYB45

CaMYBR11

CaMYBR10

CaMYB8

CaRVE1

CaSWI3A

CaMYB66

CaMYB38

CaDIV2

CaMYB59

CaMYBR6

CaMYB85

CaMYBR7

CaMYB1

CaRL3

CaMYB53

CaMYB3

CaHHO1

PD-dicap2.2

PD-total2

CaMYB24

CaMYB87

CaMYB93

CaMYB33

CaMYB77

CaAPL1

CaPHR1

CaMYB55

CaPHR4

CaMYB67

CaAPL5

CaMYB23

CaMYB120

CaMYB79

CaMYB10

CaMYBR9

CaMYBR8

CaMYB57

CaMYB11

CaMYR3

CaMYBR5

CaMYB70

CaDIV7

CaPHR3

CaPHR5

CaMYB75

CaARR1

CaMYB97

CaMYBCDC

CaSRM2

CaMYBR1

CaMYB76

CaARR4

CaMYB3R-5

CaMYBH3

CaMYBR3

CaKAN4

CaKAN6

CaADA2

CaKAN5

CaMYB21

CaETC3

CaMYB121

CaMYB63

CaMYB64

CaMYB62

CaMYB61

CaMYB65

CaMYB31

CaMYB83

CaMYB88

CaGLK1

CaMYB72

CaMYB50

CaSRM1

CaMYB69

CaMYBR13

CaMYB7

CaDIV5

CaPCL2

CaMYB27

CaMYB52

CaDIV10

CaMYB19

CaMYB46

CaMYB6

CaMYB1R-2

CaMYB96

CaAPL2

CaKAN2

CaARR7

CaSWI3C

CaMYB109

CaMYB54

CaKUA3

CaEFM1

CaKAN7

CaMYB22

CaMYB56

CaMYB71

CaGLK2

CaMYB84

CaMYB42

CaMYB86

CaLHY

CaDIV8

CaA

CaMYB114

CaMYR2

CaRVE3

CaMYB29

CaTRF4

CaMYR1

CaMYBC1

CaRAD4

CaPHR7

CaPHR6

CaMYBC2

CaMYB4

CaMYB90

CaMYB91

CaEFM2

CaMYB34

CaMYB3R-4

CaTRF3

CaBLIND

CaDIV6

CaMYB48

CaMYB41

CaARR5

CaMYB78

CaARR3

CaMYB36

CaMYB37

CaAPL4

CaMYBR4

CaRAD3

CaMYB14

CaMYB117

CaMYB113

CaSWI3D

CaKUA2

CaMYBR12

CaDIV1