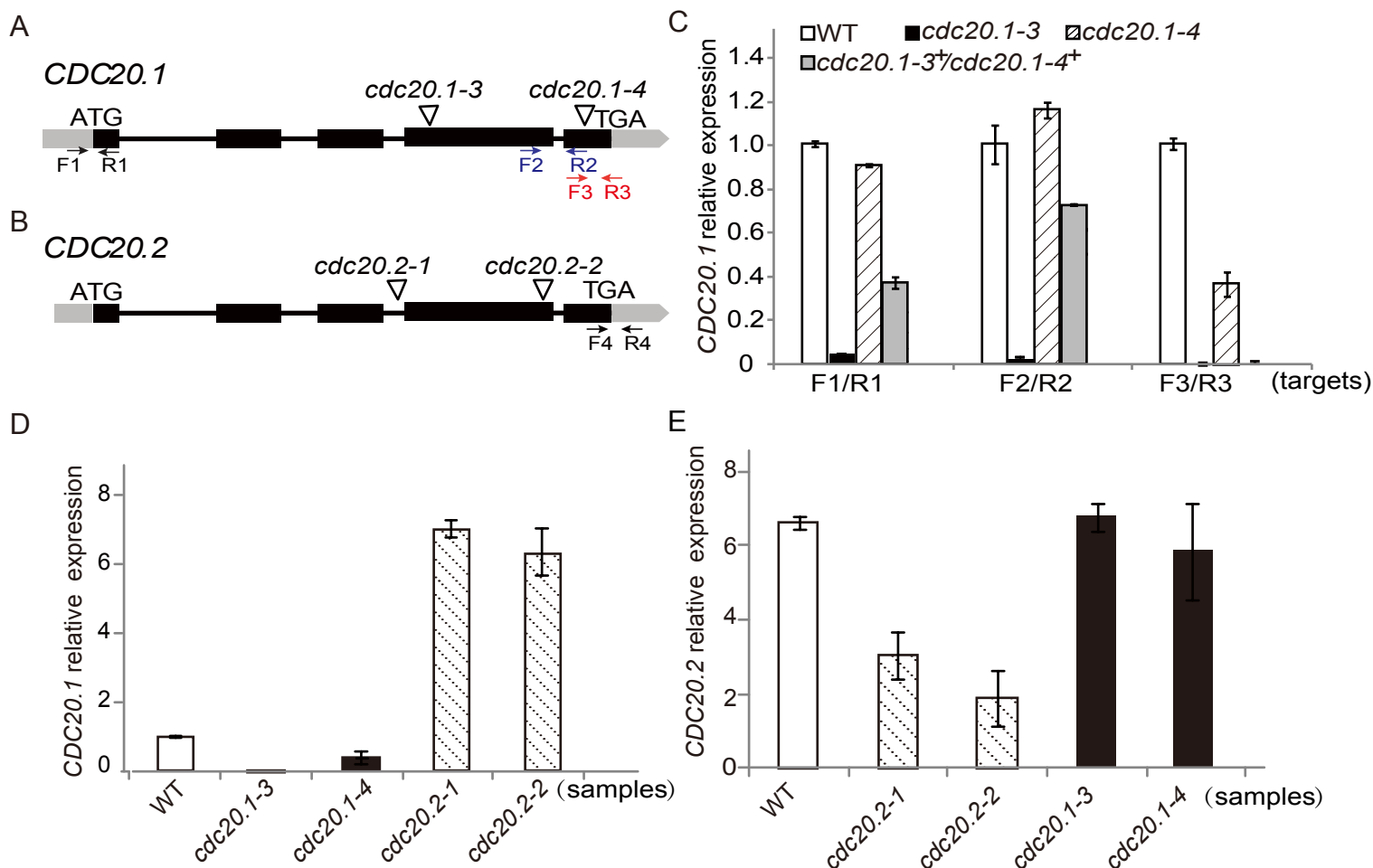


## Supplemental Figures and Table



**Supplemental Figure 1.** Schematic Representation and Examination of *CDC20.1* Expression in Different Mutant Alleles.

**(A)** Schematic representation of Arabidopsis *CDC20.1* with T-DNA insertions (inverted triangles) in *cdc20.1-3* and *cdc20.1-4*. The positions of the primers used for RT-qPCR are indicated.

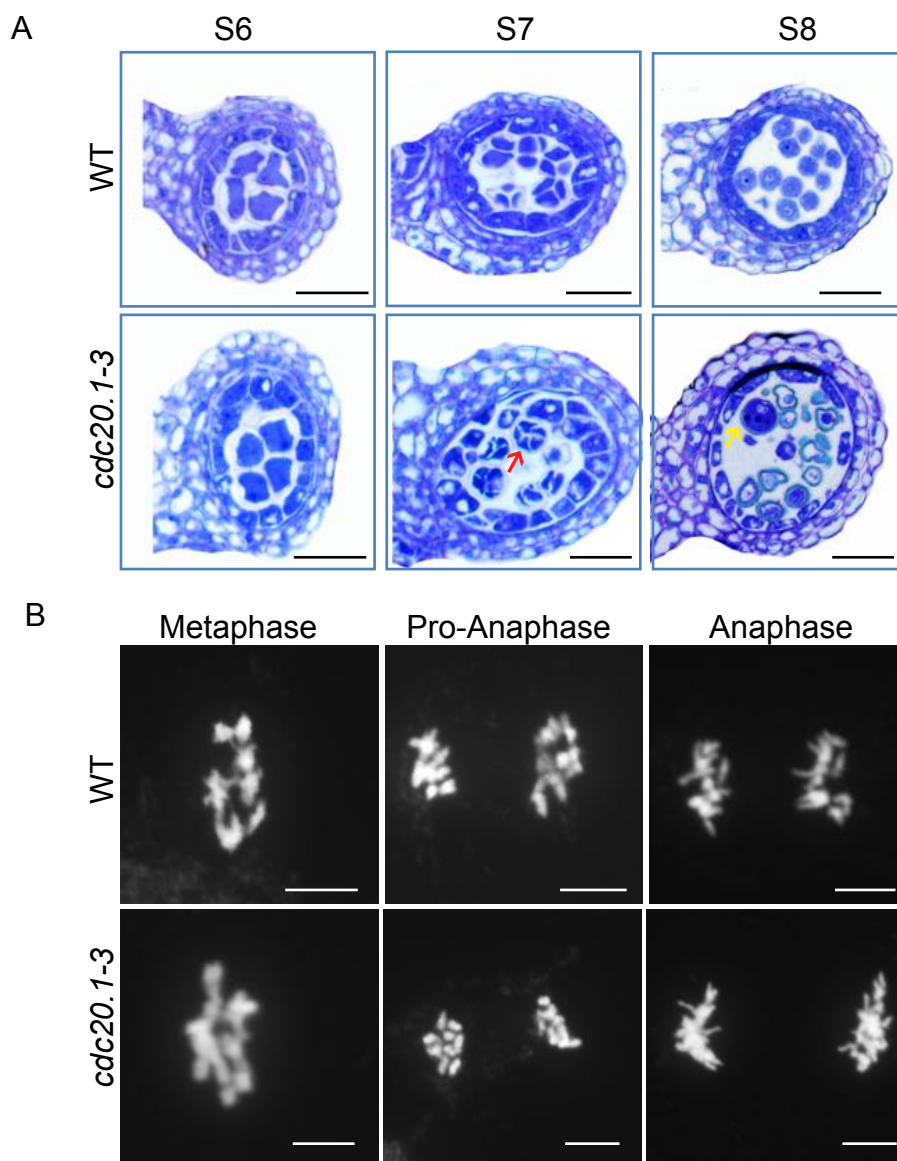
**(B)** Schematic representation of *CDC20.2* with T-DNA insertions in *cdc20.2-1* and *cdc20.2-2* alleles. Exons are shown as boxes (gray: UTR, black: CDS); and arrows indicate primer positions.

**(C)** Real-time PCR amplification of the truncated transcripts from *CDC20.1* loci in T-DNA insertional mutant alleles using different primers as shown in **(A)**.

**(D)** Real-time PCR amplification of *CDC20.1* in WT and T-DNA insertion mutant alleles of *cdc20.1-3*, *cdc20.1-4*, *cdc20.2-1* and *cdc20.2-2* using primers F3/R3 indicated in **(A)**.

**(E)** Real-time PCR amplification of *CDC20.2* in WT and T-DNA insertional mutant alleles of *cdc20.2-1*, *cdc20.2-2*, *cdc20.1-3* and *cdc20.1-4* using primers F4/R4 as shown in **(B)**.

*EF1α* was used as the internal control **(C-E)**. The experiment was conducted in three technical replicates and error bars indicate SD.

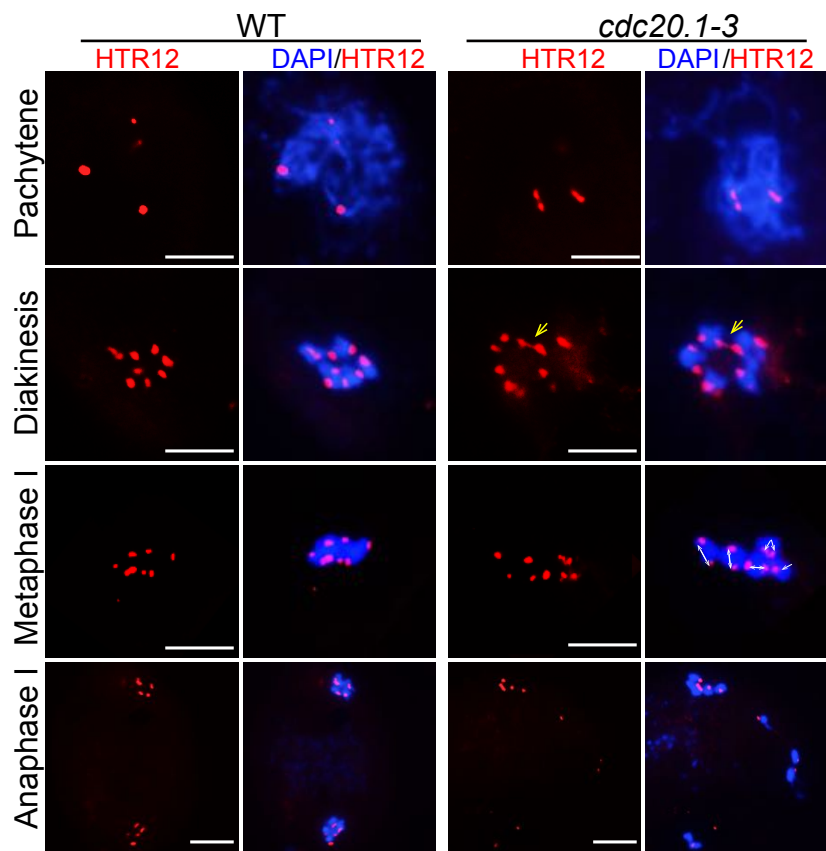


**Supplemental Figure 2.** Mitosis is Normal in *cdc20.1-3*.

**(A)** Semi-thin section of anthers at stage 6 (S6), stage 7 (S7) and stage 8 (S8) in WT (top) and *cdc20.1-3* (bottom). The *cdc20.1-3* anthers form polyads (red arrow) with more than four microspores and different sizes of pollen grain (yellow arrow).

Bars=10  $\mu$ m.

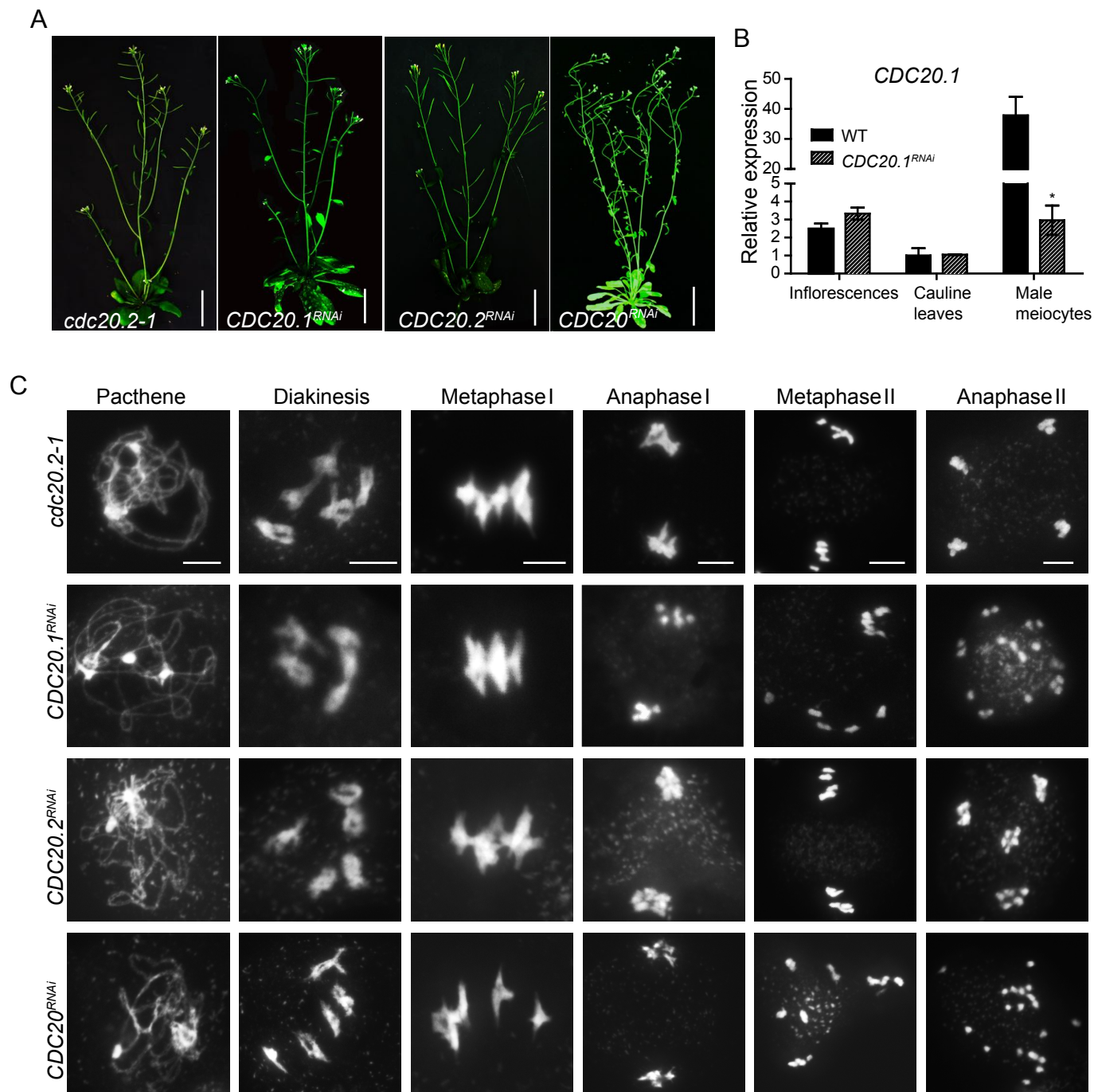
**(B)** Mitotic chromosome phenotypes in WT (top) and *cdc20.1-3* (bottom). Bars=5  $\mu$ m.



**Supplemental Figure 3.** Localization of HTR12 in WT and *cdc20.1-3*.

Immunolocalization of HTR12 (red) on DAPI stained chromosomes (blue) of WT and *cdc20.1-3* at diakinesis, metaphase I and Anaphase I Bivalents in *cdc20.1-3* associate at diakinesis (yellow arrows) and misorient (white double arrows) at metaphase I.

Bars=5  $\mu$ m.



**Supplemental Figure 4. *CDC20.2* is Dispensable for Vegetative and Reproductive Development.**

(A) Phenotypes of *cdc20.2-1*, *ProDMC1:CDC20.1<sup>RNAi</sup>*, *ProDMC1:CDC20.1<sup>RNAi</sup>* and *ProDMC1:CDC20<sup>RNAi</sup>* transgenic plant. Bars=5 cm.

(B) Expression of *CDC20.1* in WT and *ProDMC1:CDC20.1<sup>RNAi</sup>*.

(C) Meiotic chromosome phenotypes of *cdc20.2-1*, *ProDMC1:CDC20.1<sup>RNAi</sup>*, *ProDMC1:CDC20.2<sup>RNAi</sup>* and *ProDMC1:CDC20<sup>RNAi</sup>* at different stages. Bars=5  $\mu$ m.

**Supplemental Table 1.** List of Primers Used in This Study

Purpose	Primer name	Primer sequence (5' to 3')
CDC20.1.3 Genotyping	CS369798F	GATTTAGTTGTTTTCTTTACC
	CS369798R	CTGAAGTCCAGCTGTGGGAT
	pAC161	GGGCTACACTGAATTGGT
CDC20.1.4 Genotyping	CS369975F	ATGCAAGCAAATAAGTTTGACT
	CS369975R	GGTAAAGGAAAACAACCTAAATC
	PADIS1	GGGCTACACTGAATTGGT
CDC20.2.1 Genotyping	SALK_136710F	TGAATGACCTCAAAGACTCA
	SALK_136710R	GATGTGTTTCTCATATTTCT
	SALK -LBb1.3	ATTTTGCCGATTTTCGGAAC
CDC20.2.2 Genotyping	SALK_114279F	AGAAATATGAGAAACACATC
	SALK_114279R	GACCCATATCATTGATGAATC
	SALK -LBb1.3	ATTTTGCCGATTTTCGGAAC
qRT-PCR (CDC20.1)	CDC20.1F1	ACCCAATCTACTCTCGATTC
	CDC20.1R1	AGCCTGCGTCTTGTAGTGAG
	CDC20.1F2	CGGGTTTACACAGAATCAGCTC
	CDC20.1R2	ATTCCAGAACCTCAGAGTCTCA
	CDC20.1F3	TGAGACTCTGAGGTTCTGGAAT
qRT-PCR (CDC20.2)	CDC20.1R3	GCAAATAAGTTTGACTCA
	CDC20.2F4	TGAGACTCTGAGGTTCTGGAAT
qRT-PCR (EF1 $\alpha$ )	CDC20.2R4	GCAAATAAGTTTGACTCA
	EF1 $\alpha$ -F	GGTGGTATTGACAAGCGTG
DMC1::CDC20.1 - RNAi	EF1 $\alpha$ -R	GATTTTCATCGTACCTAGCC
	CDC20.1(Nco I)1st-F	CATGCCATACCCAATCTACTCTCGAT TC
	CDC20.1(Spe I)1st-R	GGACTAGTAGCCTGCGTCTTGTAGT GAG
	CDC20.1(Xba I)2nd-F	GGTCTAGAACCCAATCTACTCTCGA TTC
DMC1::CDC20.2 - RNAi	CDC20.1(Sal I)2nd-R	GCGTCGACAGCCTGCGTCTTGTAGT GAG
	CDC20.2(Nco II)1st-F	CATGCCATGGCATGATTGGCTCTACCCCTTTA TAAG
	CDC20.2(Spe I)1st-R	GGACTAGTCCCACCGATTCAAACCTGCATC
	CDC20.2(Sal I)2nd-F	ACGCGTCGACGTATTGGCTCTACCCC TTTATAAG
DMC1::-CDC20 - RNAi	CDC20.2-(Xba I)2nd-R	GCTCTAGAGCCACCGATTCAAACCT GCATC
	CDC20- (Spe I-Sal I)-F	ACGCACTAGTGGGTCGACGATCAGA TCACCCATTGTGGA
DMC1::AUR1 - RNAi	CDC20-(NcoI-XbaI)-R	GCCCATGGGCTCTAGAACTCTCTTTCATTCT TGCTC
	AUR1II(Nco II)1st-F	TGGACCATGGATGGCGATCCCTACGGAGAC
	AUR1-(Spe I)1st-R	GACTAGTGTAGCAGCTCGTCTTTTCGCTGA
	AUR1-(Xba I)2nd-F	GCTCTAGAATGGCGATCCCTACGGA GAC
qRT-PCR (AUR1)	AUR1-((Sal I)2nd-R	ACGCGTCGACGTAGCAGCTCGTCTTT
	AUR1-F	CACCAATTGGATTTGGATCT
	AUR1-R	GATAGACGTGACCGAATTTGC