

**Supplementary Table S2 Cytological, genetic and transcriptional changes in different developmental stage of laticiferous canal in *Decaisnea insignis* fruit**

Evants	Stage 1	Stage 2	Stage 3	Stage 4
Rubber accumulation	A little amount of brown irregular flocculent	Membrane structures and obvious osmiophilic mass in cytoplasm; vacuoles with increasing membrane structures; dark osmiophilic material and diffused flocculent material from the engulfed cytoplasm	A little amount of irregular flocculent and plenty of brown rubber particles	Full of round or elliptical rubber particles
	<i>DiIPP2</i>	↓	↓	↑
	<i>DiFPP</i>	↓	↓	↑
	<i>DiREF6</i>	-	↓	-
	<i>DiHRT</i>	↑	↑	↓
	<i>DiGGPPS</i>	-	↓	-
PCD characters	Relatively small size; dense cytoplasm; large nucleus; and small vacuoles	Thinning of the cell walls; the cytoplasm with more condensed feature; DNA fragmentation and TUNEL positive nuclei, misshapen nucleus with condensed chromatin; plastids with condensed matrix and indistinct thylakoids; misshapen mitochondria with disorganized membrane	Volume of secretory epidermal cells enlarged with a fivefold to eightfold increase; plastids with degenerated thylacoid system, mitochondria, and misshapen nucleus in vacuole; the nucleus enveloped by the rubber granule	The secretory epidermal cell walls with a thinner shape and even lysis of some parts; tonoplast rupture; plasma membrane collapse
	<i>DiCEP1</i>	↓	↓	-
	<i>DiXCP1</i>	-	↓	-
	<i>DiLSD1</i>	↓	↓	↑
	<i>DiLOL2</i>	-	↑	↑

**Note:** The arrows indicate trends at gene expression levels based on transcript FPKM values: a "↑↓" arrow indicates that the gene is significantly ( $p < 0.05$ ) up or down regulated from the previous stage, and a "-" indicates that the gene is not significantly different from the previous stage.