

SUPPLEMENTAL INFORMATION

FIGURE S1. Data comparison of two biological replicates in heatmaps. $\text{Log}_2(\text{L}/\text{H})$ data listed in Table S1A and Table S2A were used in generating the data. Proteins are listed with one of the replicates aligned from low $\text{Log}_2(\text{L}/\text{H})$ value to high $\text{Log}_2(\text{L}/\text{H})$ value. (A) Total mitochondrial proteins; (B) Assembled mitochondrial proteins.

FIGURE S2. Comparison of YtA and YtB mitochondrial proteins by Western blotting. Equal amounts of mitochondrial proteins from YtA and YtB were run on tricine-SDS-PAGE and stained with Coomassie Blue G250. Western blots were probed with antibodies to HSP60, ATP1, PHB2, NAD9, ORFB, CYTC, or ORFH79.

FIGURE S3. Heatmap generated from the number of identified peptides per protein versus BN gel fractions, showing the correlation of certain subunits with their relevant complexes.

FIGURE S4. Equal amounts of mitochondrial proteins from the ORFH79 positive transgenic line (Trans79) and blank-vector negative transgenic line (TransBL) were resolved by tricine-SDS PAGE and silver stained. In-gel activity of Complex V was compared between Trans79 and TransBL.

FIGURE S5. Immunoprecipitation of ORFH79 and other selected proteins in YtA and YtB mitochondrial extracts. Lane 1: YtA mitochondria IP with anti-ORFH79 serum; Lane 2: YtB mitochondria IP with anti-ORFH79 serum; Lane 3: YtA mitochondria IP with pre-immune serum; Lane 4: YtA mitochondria IP with anti-PHB2 serum; Lane 5: YtA mitochondria IP with anti-HSP60 serum; Lane 6: YtA mitochondria IP with normal IgG from rabbits. Lane 7 was a positive control of the whole SDS-denatured extract of YtA mitochondria. The antibodies used for detection are indicated on the right.

FIGURE S6. The MS spectra of peptide GFQDVLAWADAER used for the identification and quantitation of sex determination protein tasselseed-2 (Os07g46920.1). (A and B) The MS2 spectra of light or heavy labeled peptides used for peptide identification. (C) The MS1 spectra of light or heavy labeled peptides used for peptide relative quantitation.

Table S1. Quantitative analysis of total mitochondrial proteins.

Table S1A . Total mitochondrial protein summary.

Columns A, B-D, E-G, H-K, L, M-O represent the TIGR locus number, protein data of biological replication 1# (Number of identified peptides, quantitated ratio [L/H; YtA/YtB], standard deviation), protein data of biological replication 2#, summary information (average ratio [L/H; YtA/YtB], standard deviation, *p*-value, whether significant different to ratio=1), molecular mass and functional description of identified total mitochondrial proteins from Honglian CMS rice, respectively. Columns P, Q, R, and S-T show TAIR locus number, E-Value, abbreviated name, and functional description of the orthologous *Arabidopsis* proteins.

Table S1B. Peptide summary of biological replication #1

Table S1C. Peptide summary of biological replication #2

Table S2. Quantitative analysis of assembled mitochondrial proteins.

Table S2A . Assembled mitochondrial protein summary.

Columns A, B, C-E, F-H, I-L, M, N-P represent the corresponding fraction on the BN gel fraction, TIGR locus number, protein data of biological replication 1# (Number of identified peptides, quantitated ratio [L/H; YtA/YtB], standard deviation), protein data of biological replication 2#, summary information (average ratio [L/H; YtA/YtB], standard deviation, *p*-value, whether significant different to ratio=1), molecular mass and functional description of identified assembled mitochondrial proteins from Honglian CMS rice, respectively. Columns Q, R, S, and T-U show TAIR locus number, E-Value, abbreviated name, and functional description of the orthologous *Arabidopsis* proteins.

Table S2B. Peptide summary of biological replication #1

Table S2C. Peptide summary of biological replication #2

A

Log₂(L/H) of Total Mitochondrial Proteins

-1.8 0 1.0



B

Log₂(L/H) of Assembled Mitochondrial Proteins

-4.7 -1.2 1.6

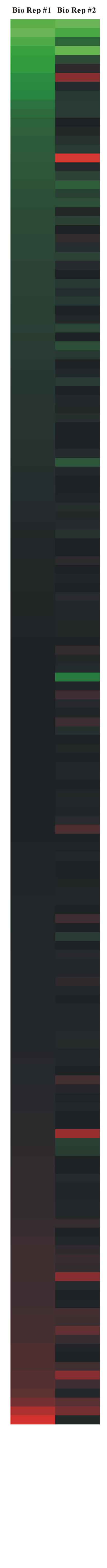
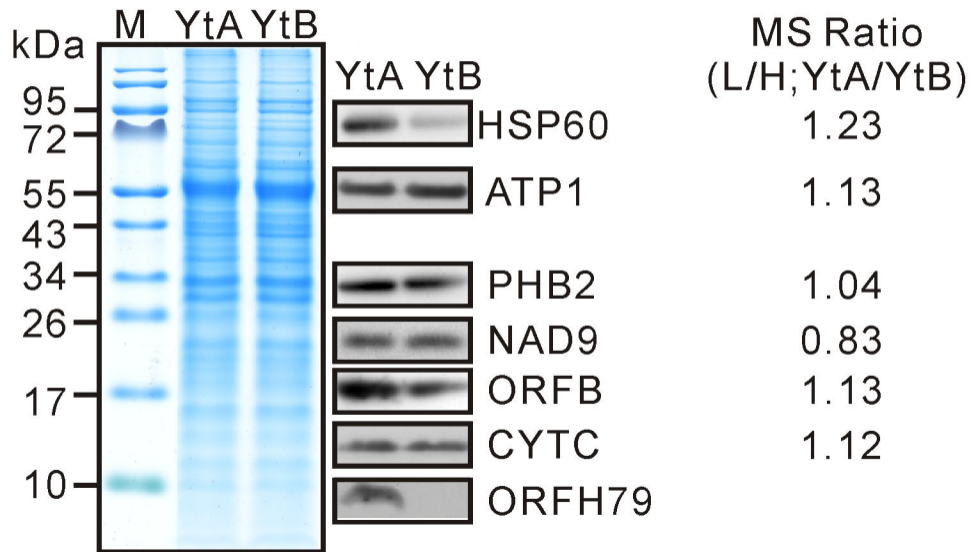


Figure S2



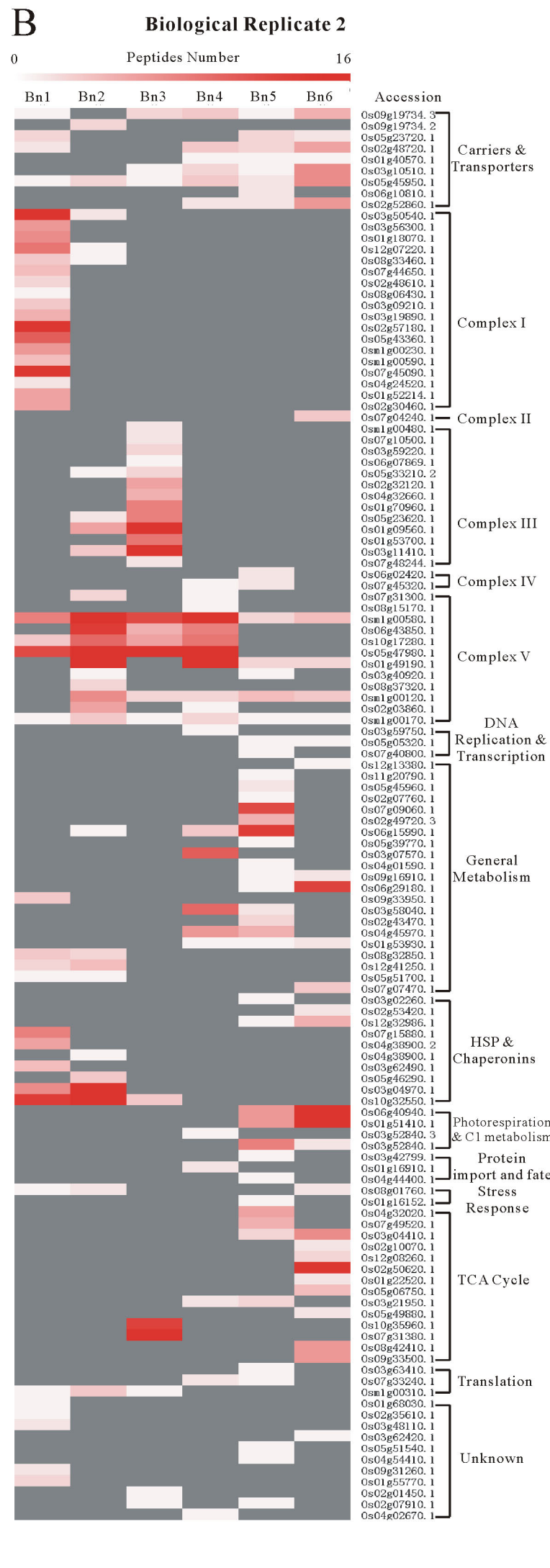


Figure S4

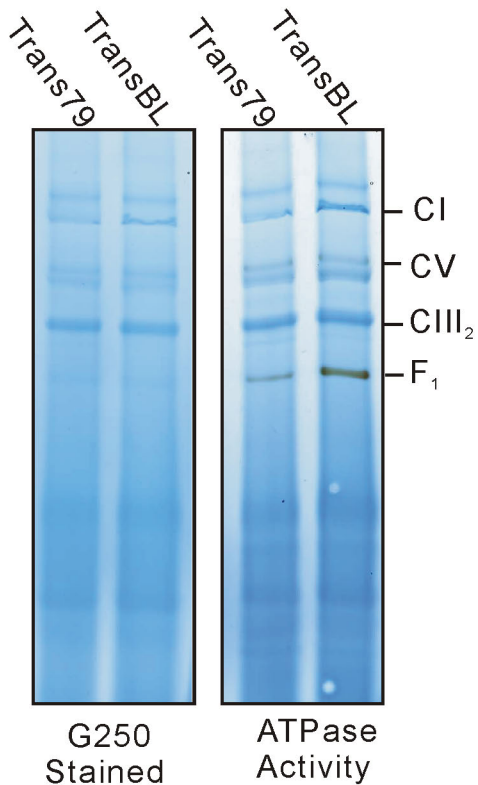
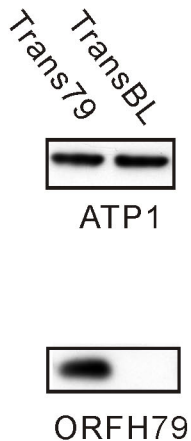
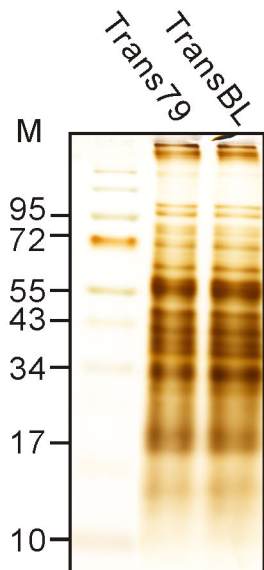
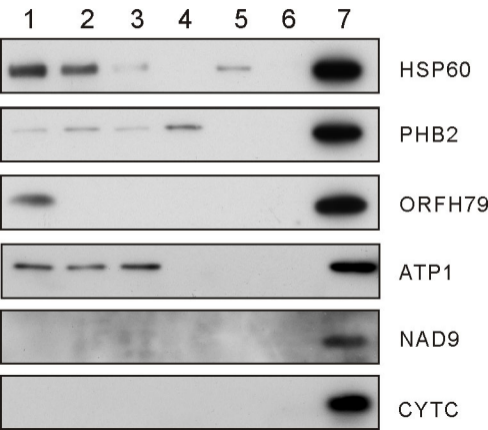


Figure S5

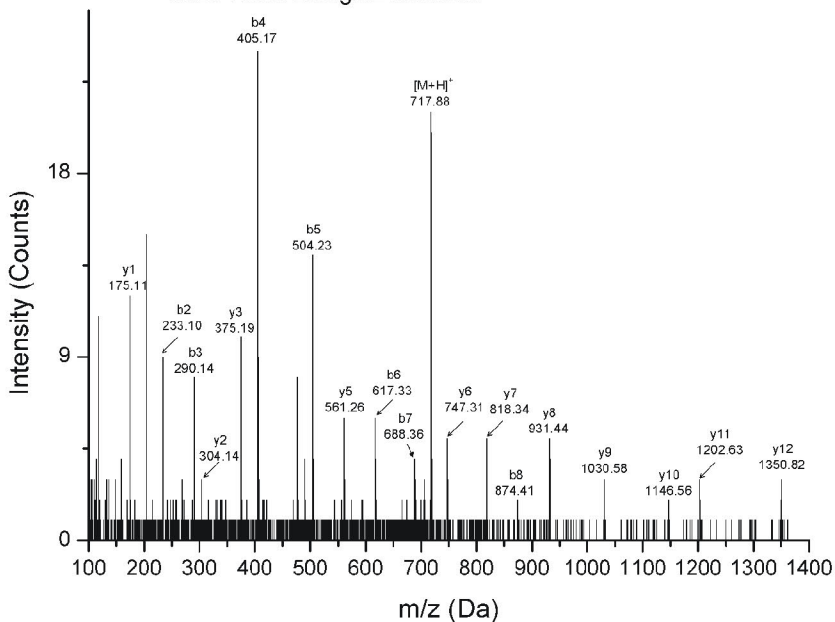


Light Labeled Peptide

GFGDVLAWADAER Dimethyl (N-term)

 m/z :717.85 charge:2 score:99

A

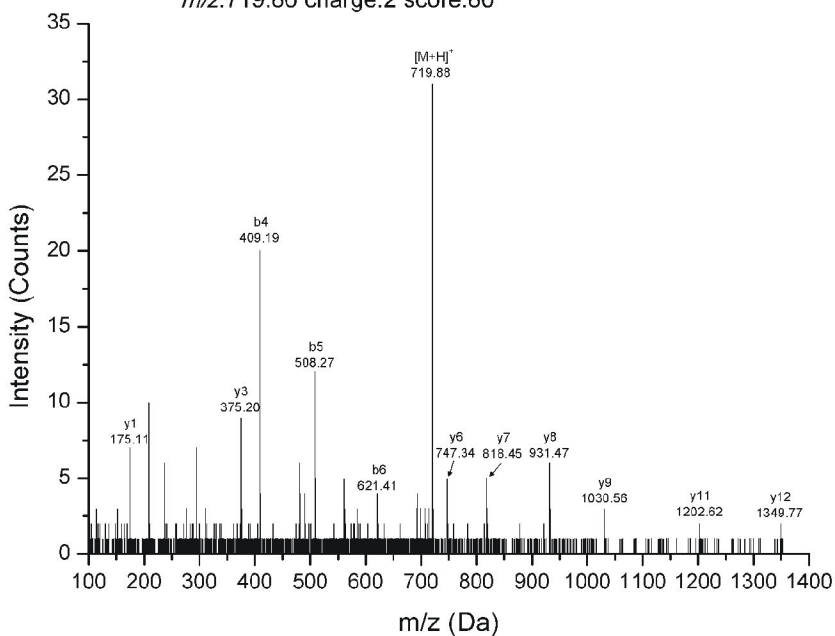


Heavy Labeled Peptide

GFGDVLAWADAER Dimethyl:2H(4) (N-term)

 m/z :719.86 charge:2 score:80

B



C

protein:Os07g46920

peptide:GFGDVLAWADAER

L/H=3.24

