

Supplementary Materials

Effect of Amino Acids on Folates Accumulation in Wheat Seedlings during Germination under Red Light Radiation

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Table S1. Correlation between the production of folates with the gene expression of four enzymes.

	<i>GTPCHI</i>	<i>ADCS</i>	<i>HPPK/DHPS</i>	<i>FPGS</i>
<i>ADCS</i>	0.61*			
<i>HPPK/DHPS</i>	0.45*	−0.27		
<i>FPGS</i>	0.63**	0.14	0.38	
Folates	0.80**	0.63**	0.29	0.62**

GTPCHI: guanosine triphosphate cyclohydrolase I, *ADCS*: aminodeoxychoris-mate synthase, *HPPK/DHPS*: 6-hydroxymethyldihydropterin pyrophosphoki-nase/dihydropteroate synthase, *FPGS*: folylpolyglutamate synthetase. * $p < 0.05$; ** $p < 0.01$.

Table S2. Parameters for determination of folates and precursors standards.

Folate	Precursor ion (<i>m/z</i>)	Product ion (<i>m/z</i>)	DP (V)	EP(V)	CE (V)	CXP(V)
THF	446.2	299.3	80	10	25	10
	446.2	166.3	80	10	59	10
5-CH ₃ -THF	460.3	313.2	70	10	27	10
	460.3	194.2	60	10	47	10
5-CHO-THF	474.2	299.3	61	10	43	10
	474.2	166.3	120	10	54	10
10-CHO-FA	470.1	295.3	65	10	35	10
	470.1	176.2	86	10	59	10
<i>p</i> ABA	138.0	77.0	80	10	30	10
	138.0	94.0	80	10	19	10
Pterin	194.0	176.0	60	10	23	10
	194.0	106.0	60	10	39	10

Note: DP: declustering potential; EP: entrance potential; CE: collision energy; CXP: collision cell exit potential; V: volt.

Table S3. Sequences of primers used in this study.

Gene	Primer name	Primer sequences(5'→3')	Gene Bank Access No.
<i>GTPCHI</i>	Sense	GAGGACCCCCTAAGGAAAGA	EF095153.1
	Ant-sense	CTGGGCACAAAATGGCAA	
<i>ADCS</i>	Sense	ATGCTTGCAGAGAGAAACAGC	EF208804.1
	Ant-sense	CCGCCCTTACCACCCATAAA	
<i>HPPK/DHPS</i>	Sense	TCTTGGAAGCAATGTGGGGG	EF208803.1
	Ant-sense	GGCTGGTCGGTCACATACTC	
<i>FPGS</i>	Sense	CCAAGCAGTGTGGGAGAAAT	EF208805.1
	Ant-sense	GGGAGCCAGTAACAAGGACC	