

**Supplemental Table S3. Nitrogenase activity and expression analysis of marker genes for nodule development.**

Nitrogenase (Nase) activity assayed by ARA, and transcript level for each marker gene assayed by qRT-PCR, were determined in nodules harvested at different dpi from inoculated common bean plants grown under different treatments, as indicated. The selected marker genes are: PvENOD55: Early nodulin 55 (Phvul.003G155600) for early (immature) nodules, PvPEPc: Phosphoenolpyruvate carboxylase (Phvul.005G066400) for mature nodules and PvCP: Cystein proteinase (Phvul.003G240800) for late (senescent) nodules. Values are expressed relative to the highest Nase activity or expression value for each gene (100%) in effective nodules, these represent the average ( $\pm$ SD) from three biological replicates and two technical replicates each.

Samples	Nase Activity (%)	Relative expression (%)		
		ENOD55	PEPc	CP
<b>Effective nodules elicited by <i>R. etli</i> CE3 wt strain</b>				
13dpi	19.6	<b>100</b>	3.6	0.03
18dpi	<b>100</b>	5.6	<b>100</b>	0.04
25dpi	49.0	3.9	25.1	9.7
35dpi	11.2	1.9	3.8	<b>100</b>
<b>Ineffective nodules elicited by <i>R.etli nifA</i>- mutant strain</b>				
13dpi	0.0	177.5	3.4	0.27
18dpi	0.0	100.8	2.5	43.3
25dpi	0.0	56.7	1.7	148.7
35dpi	0.0	16.2	1.3	71.5
<b>NO<sub>3</sub> treated effective nodules</b>				
18dpi –NO <sub>3</sub> (Control)	<b>100</b>	5.6	<b>100</b>	0.04
19dpi + NO <sub>3</sub> (1 day post treatment)	28.5	0.36	67.8	11.1
21dpi + NO <sub>3</sub> (3 day post treatment)	11.7	0.56	0.58	58.8