

Figure S1. Some exo genes show elevated expression levels in the nodule nitrogen fixation zone (ZIII). (A) Relative expression levels of exo genes along the symbiotic process represented by distinct nodule sections. (B) Relative expression levels of selected NCR peptide genes along the symbiotic process represented by distinct nodule sections. Data for this figure were derived from Roux *et al.* (2014).

Supplemental Reference

Roux B, Rodde N, Jardinaud MF, Timmers T, Sauviac L, Cottret L, Carrere S, Sallet E, Courcelle E, Moreau S, Debelle F, Capela D, de Carvalho-Niebel F, Gouzy J, Bruand C, Gamas P. 2014. An integrated analysis of plant and bacterial gene expression in symbiotic root nodules using laser capture microdissection coupled to RNA-seq. *Plant J* 77:817-837.

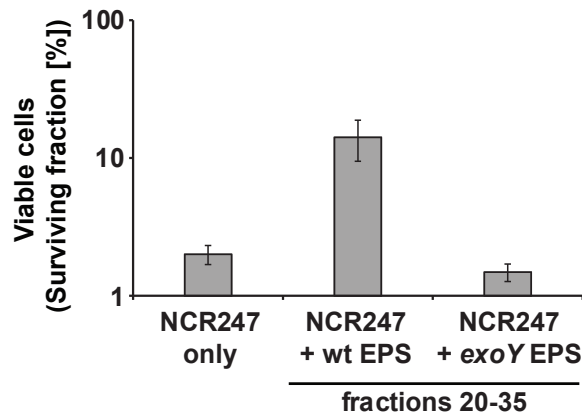


Figure S2. *exoY* mutant supernatant does not contain succinoglycan. Wild-type and *exoY* mutant supernatants were precipitated with three volumes of ethanol and then 500 μg of polysaccharide were separated on a BioGel P-6 size exclusion column. Then the fractions containing HMW succinoglycan (20-35) in wild-type supernatant were collected from both preparations and lyophilized (compare Fig. 5A and D). Lyophilized material from both preparations was then re-suspended in 1 ml of purified H_2O and the polysaccharide concentration of the wild-type fractions determined. *S. meliloti* Sm1021 were treated with 20 μM NCR247 together with either 50 $\mu\text{g ml}^{-1}$ of wild-type peak polysaccharide or the corresponding dilution (same dilution factor as wild-type) of *exoY* mutant fractions 20-35 for 5 hours and viable bacteria were recovered. Bars and error bars indicate the mean \pm standard deviation. The results are representative of trends observed in two independent experiments.

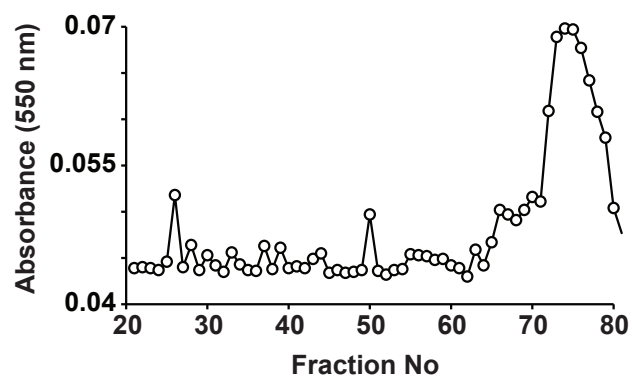


Figure S3. Column volume and polysaccharide distribution after BioGel P-6 column fractionation. 2 ml of $200 \mu\text{g ml}^{-1}$ CoCl_2 in ammonium acetate were loaded onto a BioRad Bio Gel P-6 size exclusion column and 1.6 ml fractions were collected. Then the optical density at 550 nm was determined for every fraction.

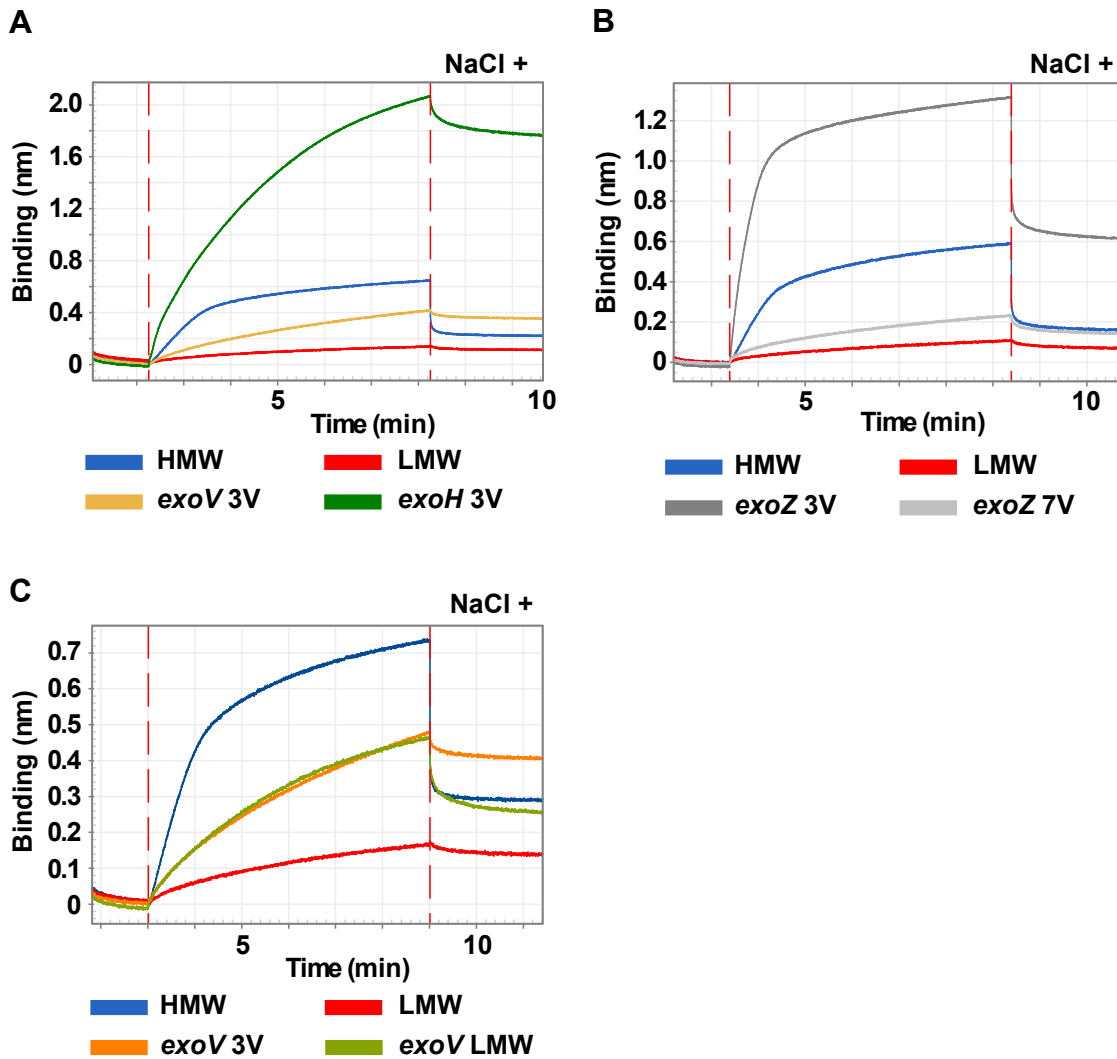


Figure S4. Succinoglycan modifications affect molecular binding to NCR247. Octet bio-layer interferometry assays were performed as described in the materials and methods section. The concentrations of free succinoglycan was kept constant for HMW and LMW forms at $10 \mu\text{g ml}^{-1}$. Where indicated, the ammonium acetate assay buffer was supplemented with 0.1 M NaCl. Results shown are representative of at least two independent experiments. HMW - High molecular weight succinoglycan, LMW - Low molecular weight succinoglycan, 3V – supernatant precipitated with three volumes of ethanol, 7V – 3V fraction precipitated with an additional seven volumes of ethanol.