Supplementary Table S1. RT-qPCR Primers

Human Genes

| Gene* | Product Size (bp) | Forward S equence | Revers e S equence | | |
|--------------|-------------------|-----------------------------------|--------------------------------|--|--|
| AITRL | 158 | 5'-AGCCATTCAAGAACTCAAGGAG-3' | ' 5'-GGTCCAAACTTAGCCATACAGG-3' | | |
| ANG2 | 73 | 5'-TCTTGGCCGCAGCCTATAAC-3' | 5'-TGCTGGACCTGATATTGCTTCT-3' | | |
| APRIL | 168 | 5'-CTCTGCTGACCCAACAAACAG-3' | 5'-TTTTCCGGGATCTCTCCCCAT-3' | | |
| BAFF | 79 | 5'-GGGAGCAGTCACGCCTTAC-3' | 5'-CGTGGGAGGATGGAAACACAC-3' | | |
| CCL2 | 152 | 5'-GATCTCAGTGCAGAGGCTCG-3' | 5'-TGCTTGTCCAGGTGGTCCAT-3' | | |
| CCL20 | 224 | 5'-TGCTGTACCAAGAGTTTGCTC-3' | 5'-CGCACACAGACAACTTTTTCTTT-3' | | |
| CSF1 | 228 | 5'-GCTCTCCCAGGATCTCATCAC-3' | 5'-TCAAAGGAACGGAGTTAAAACGG-3 | | |
| CXCL1 | 97 | 5'-GAAAGCTTGCCTCAATCCTG-3' | 5'-CTTCCTCCTCCCTTCTGGTC-3' | | |
| CXCL2 | 103 | 5'-GGCCAGAAAGCTTGTCTCAA-3' | 5'-GCTTCCTCCTTCCTTCTGGT-3' | | |
| IL1B | 100 | 5'-CAGCTACGAATCTCCGACCAC-3' | 5'-GGCA GGGAACCAGCATCTTC-3' | | |
| IL4 | 150 | 5'-CCAACTGCTTCCCCCTCTG-3' | 5'-TCTGTTACGGTCAACTCGGTG-3' | | |
| IL6 | 159 | 5'-AACCTGAACCTTCCAAAGATGG-3' | 5' TCTGGCTTGTTCCTCACTACT-3' | | |
| IL8 | 194 | 5'-TTTTGCCAAGGAGTGCTAAAGA-3' | 5'-AACCCTCTGCACCCAGTTTTC-3' | | |
| IL10 | 176 | 5'-TCAAGGCGCATGTGAACTCC-3' | 5'-GATGTCAAACTCACTCATGGCT-3' | | |
| IL13 | 122 | 5'-GA A GGCT CCGCT CTGCA A T-3' | 5'-TCTGGGTCTTCTCGATGGCA-3' | | |
| TGF-β | 251 | 5'-ACGGCGTTACAGTGTTTCTG-3' | 5'-ACAGTAGTTGGAAGTTCTAT-3' | | |
| TNF-α | 217 | 5'-ATGA GCA CTGAAA GCA TGA TCC-3' | 5'-GAGGGCTGATTAGAGAGAGGTC-3' | | |
| VEGFA | 117 | 5'-ATCACGAAGTGGTGAAGTTC-3' | 5'-TGCTGTAGGAAGCTCATCTC-3' | | |
| β-actin | 131 | 5'-TCCTCTCCCAAGTCCACACAGG-3' | 5'-GGCACGAAGGCTCATCATTC-3' | | |

| Mouse Genes | | | | | | | | | |
|-------------|-------------------|-------------------------------|------------------------------|--|--|--|--|--|--|
| Gene* | Product Size (bp) | Forward Sequence | Revers e S equence | | | | | | |
| AITRL | 131 | 5'-ATGTCTTTCTAACCTTGATC-3' | 5'-AGAGTTTGGAGGGATTAAGG-3' | | | | | | |
| Ang 2 | 68 | 5'-TGGTACTACTGGAAGGGGTCCG-3' | 5'-GAAATCTGCTGGCCGGATCA-3' | | | | | | |
| APRIL | 109 | 5'-AGTCCTGCATCTTGTTCCAG-3' | 5'-TGTCCTTCCCGAGATACCAC-3' | | | | | | |
| BAFF | 129 | 5'-TGGGTCATGTCATCCAGAGG-3' | 5'-CATCTCCTTCTTCCAGCCTC-3' | | | | | | |
| CCL2 | 91 | 5'-CCACTCACCTGCTGCTACTC-3' | 5'-GGTTCCGATCCAGGTTTTTA-3' | | | | | | |
| CCL20 | 179 | 5'-AGGCAGAAGCAACTAC-3' | 5'-TTTTCACCCAGTTCTGCTTT-3' | | | | | | |
| CSF1 | 149 | 5'-ACAGAGGACCAAAAGCCAGT-3' | 5'-A CGGGGGTGGCTGA GTTGCT-3' | | | | | | |
| CXCL1 | 168 | 5'-GCTGGGATTCACCTCAAGAA-3' | 5'-TGGGGACACCTTTTAGCATC-3' | | | | | | |
| CXCL2 | 175 | 5'-AGGCTA CAGGGGCTGTTGT-3' | 5'-TTCAGGGTCAAGGCAAACTT-3' | | | | | | |
| IL1B | 89 | 5'-CAGCTACGAATCTCCGACCAC-3' | 5'-GGCAGGGAACCAGCATCTTC-3' | | | | | | |
| IL4 | 169 | 5'-AGTTGTCATCCTGCTCTTCT-3' | 5'-CTGTGGTGTTCTTCGTTGCT-3' | | | | | | |
| IL6 | 76 | 5'-TAGTCCTTCCTACCCCAATTTCC-3' | 5'-TTGGTCCTTAGCCACTCCTTC-3' | | | | | | |
| IL10 | 149 | 5'-TGCA GTGTGTA TTGA GTCTG-3' | 5'-GCTCAGTGAATAAATAGAAT-3' | | | | | | |
| IL13 | 179 | 5'-GTCTCTCCCTCTGACCCTTA-3' | 5'-CTCTGGGTCCTGTA GA TGGC-3' | | | | | | |
| TGF-β | 133 | 5'-CTCCCGTGGCTTCTAGTGC-3' | 5'-GCCTTAGTTTGGACAGGATCTG-3' | | | | | | |
| TNF-α | 61 | 5'-CCCTCACACTCAGATCATCTTCT-3' | 5'-GCTACGACGTGGGCTACAG-3' | | | | | | |
| VEGFA | 105 | GCACATAGAGAGAATGAGCTTCC | 5'-CTCCGCTCTGAACAAGGCT-3' | | | | | | |
| β-actin | 153 | 5'-GGCTGTATTCCCCTCCATCG-3' | 5'-CCAGTTGGTAACAATGCCATGT-3' | | | | | | |

^{*}Primers were designed based on human or mouse CDS of targets found in NCBI database. All primers were validated using human and mouse universal cDNA. Primers were confirmed to exclusively detect species-specific cDNA.

Supplementary Table S2. Effect of TLR4 on incidence and metastatic burden in nab-PXL treated and untreated mice

| Organ TLR4 Status Treatment ^a Incidence Burden ^b Fold Change ^c TLR4+ vs. Untreated Vs. Treated MDA-MB-231 Mode! Lymph Nodes TLR4+ 100 344.7 ± 92.6 NS d Lungs TLR4+ nab-PXL 100 139.1 ± 96.3 2.5↓ NS d Lungs TLR4+ nab-PXL 100 23.5 ± 11.3 NS Lymph Nodes TLR4+ nab-PXL 100 222.8 ± 100.6 NS Lymph Nodes TLR4- nab-PXL 20 50.0° 4.4↓ NS Lungs TLR4- nab-PXL 20 0.6 4.5↓ 0.003 Lymph Nodes TLR4- 50 19.5 ± 11.4 Lungs TLR4- 50 19.5 ± 11.4 Lungs TLR4- nab-PXL 20 2.1 ± 1.7 9.3↓ | | W. W | | | | | P-Value | | | | | |
|--|------------------|--|------------------------|-----------|--------------------|---------------|---------|-------------|--|--|--|--|
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | | | | h | | | | | | | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Organ | Status | Treatment ^a | Incidence | Burden | Change | TLR4+ | vs. Treated | | | | |
| Nodes TLR4+ TLR4- TLR4- | MDA-MB-231 Model | | | | | | | | | | | |
| Lungs TLR4+ $OLD = PXL$ 100 23.5 ± 11.3 NS Lymph Nodes TLR4- $OLD = PXL$ 100 222.8 ± 100.6 NS NS Lungs TLR4- $OLD = PXL$ 20 50.0° 4.4↓ NS Lungs TLR4- $OLD = PXL$ 20 0.6 4.5↓ 0.003 TLR4- $OLD = PXL$ 20 0.6 4.5↓ 0.003 0.04 HCC1806 Model Lymph Nodes TLR4- $OLD = PXL$ 20 2.1 ± 1.7 9.3↓ NS Lungs TLR4- $OLD = PXL$ 20 2.1 ± 1.7 9.3↓ NS Lungs TLR4- $OLD = PXL$ 30 1.1 ± 1.0 5.5↑ NS Lymph Nodes TLR4+ $OLD = PXL$ 30 1.1 ± 1.0 5.5↑ NS Lymph Nodes TLR4+ $OLD = PXL$ 90 1325.5 ± 649.3 245.3↑ 0.008 0.002 Lungs TLR4+ $OLD = PXL$ | | TLR4+ | | 100 | 344.7 ± 92.6 | | | | | | | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | TLR4+ | nab-PXL | 100 | 139.1 ± 96.3 | 2.5↓ | | NS^d | | | | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Lungs | TLR4+ | | 100 | 23.5 ± 11.3 | | | | | | | |
| Nodes TLR4 100 222.8 ± 100.6 NS TLR4- nab-PXL 20 50.0e 4.4↓ NS Lungs TLR4 80 2.7 ± 0.9 0.03 TLR4- nab-PXL 20 0.6 4.5↓ 0.003 0.04 HCC1806 Model Lymph Nodes TLR4 50 19.5 ± 11.4 NS Lungs TLR4- nab-PXL 20 2.1 ± 1.7 9.3↓ NS Lungs TLR4 10 0.2 NS Lymph Nodes TLR4- nab-PXL 30 1.1 ± 1.0 5.5↑ NS Lymph Nodes TLR4+ 50 5.4 ± 2.4 NS TLR4+ nab-PXL 90 1325.5 ± 649.3 245.3↑ 0.008 0.002 Lungs TLR4+ 40 0.1 ± 0.08 NS | | TLR4+ | nab-PXL | 100 | 11.3 ± 3.8 | 2.1↓ | | NS | | | | |
| Lungs TLR4- TLR4- nab-PXL 80 20 2.7 ± 0.9 0.6 4.5↓ 0.003 0.003 0.003 HCC1806 Model Lymph Nodes TLR4- TLR4- nab-PXL 50 20 20 2.1 ± 1.7 10.3↓ 9.3↓ <b< td=""><td>• •</td><td>TLR4-</td><td></td><td>100</td><td>222.8 ± 100.6</td><td></td><td>NS</td><td></td></b<> | • • | TLR4- | | 100 | 222.8 ± 100.6 | | NS | | | | | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | TLR4- | nab-PXL | 20 | 50.0 ^e | 4.4↓ | NS | | | | | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Lungs | TLR4- | | 80 | 2.7 ± 0.9 | | 0.03 | | | | | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | TLR4- | nab-PXL | 20 | 0.6 | 4.5↓ | 0.003 | 0.04 | | | | |
| Nodes TLR4- 30 19.5 ± 11.4 NS Lungs TLR4- nab-PXL 20 2.1 ± 1.7 9.3 ↓ NS Lungs TLR4- 10 0.2 TLR4- nab-PXL 30 1.1 ± 1.0 5.5 ↑ NS Lymph Nodes TLR4+ 50 5.4 ± 2.4 NS TLR4+ nab-PXL 90 1325.5 ± 649.3 245.3 ↑ 0.008 0.002 Lungs TLR4+ 40 0.1 ± 0.08 NS | HCC1806 Model | | | | | | | | | | | |
| Lungs TLR4- TLR4- nab-PXL 10 30 0.2 1.1 ± 1.0 5.5 ↑ NS Lymph Nodes TLR4+ 50 TLR4+ 5.4 ± 2.4 90 NS 245.3 ↑ Lungs TLR4+ 40 0.1 ± 0.08 NS | | TLR4- | | 50 | 19.5 ± 11.4 | | | | | | | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | TLR4- | nab-PXL | 20 | 2.1 ± 1.7 | 9.3↓ | | NS | | | | |
| Lymph Nodes TLR4+ 50 5.4 ± 2.4 NS TLR4+ nab-PXL 90 1325.5 ± 649.3 245.3 \(^{\dagger}\) 0.008 0.002 Lungs TLR4+ 40 0.1 ± 0.08 NS | Lungs | TLR4- | | 10 | 0.2 | | | | | | | |
| Nodes $1LR4+$ 30 3.4 ± 2.4 NS $1LR4+$ nab-PXL 90 1325.5 ± 649.3 245.3 0.008 0.002 Lungs $1LR4+$ 40 0.1 ± 0.08 NS | | TLR4- | nab-PXL | 30 | 1.1 ± 1.0 | 5.5↑ | | NS | | | | |
| Lungs TLR4+ 40 0.1 ± 0.08 NS | | TLR4+ | | 50 | 5.4 ± 2.4 | | NS | | | | | |
| e e e e e e e e e e e e e e e e e e e | | TLR4+ | nab-PXL | 90 | 1325.5 ± 649.3 | 245.3↑ | 0.008 | 0.002 | | | | |
| TLR4+ nab-PXL 90 1.2 ± 0.3 12.0 0.01 0.004 | Lungs | TLR4+ | | 40 | 0.1 ± 0.08 | | NS | | | | | |
| ••• | | TLR4+ | nab-PXL | 90 | 1.2 ± 0.3 | 12.0 ↑ | 0.01 | 0.004 | | | | |

^aMice were treated with nab-PXL at the dose of 10 mg/kg for 10 days
^bExpressed as RLU/mg of total protein x10⁴± SEM
^cFold decrease (↓) or increase (↑) as compared with untreated controls; increases are bolded

^dNS, non-significant

^eThe values without SEM indicate a single positive animal per group