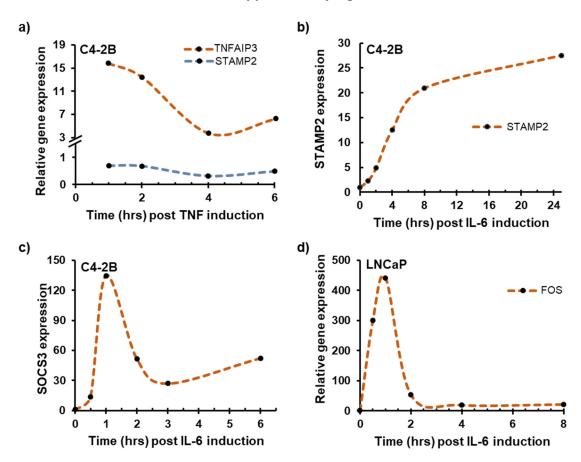
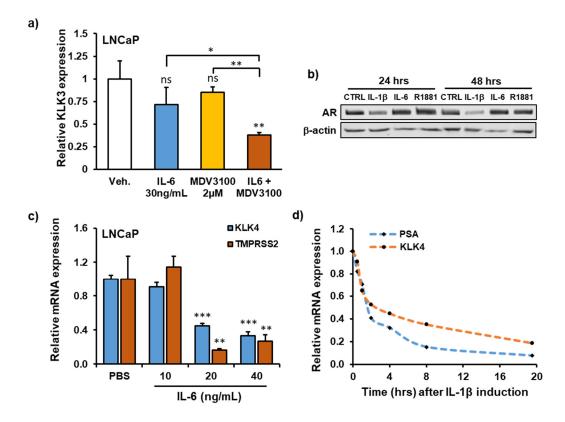
#### **Supplementary Figure 1**

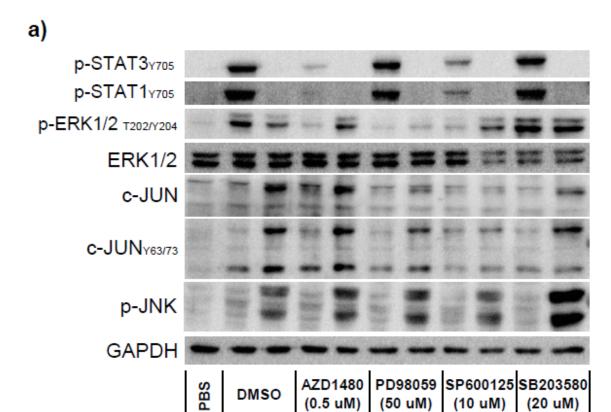


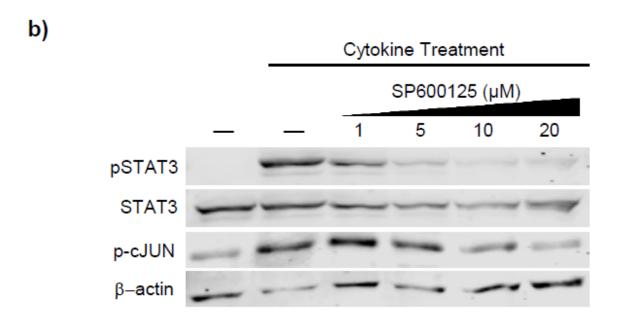
**Supplementary Figure 1: Regulation of STAMP2 expression by cytokines. a-d)** Cells were serum-starved before induction with 20 ng/mL TNF (a) or IL-6 (b-d). Total RNA was harvested at the indicated time points and subjected to qRT-PCR analysis.

#### **Supplementary Figure 2**



Supplementary Figure 2: Cytokines negatively regulate AR signaling in PCa cells. a) Serumstarved LNCaP cells were pretreated with or without enzalutamide (MDV) for 2 hours and then IL-6 treatment was performed. Total RNA was harvested 16 hours later and subjected to qRT-PCR analysis to detect KLK3 expression levels. Statistics shown by asterisks above the columns are relative to vehicle treatment. b) LNCaP cells were treated with 20 ng/ml IL-1 $\beta$  or IL-6, or 1 nM R1881. At indicated time points, cells were harvested and Western blotting was performed to detect AR levels. c-d) LNCaP cells were serum-starved before induction with increasing concentrations of IL-6 (for 16 hours) (c) or 20 ng/mL IL-1 $\beta$  (d). Total RNA was harvested and expression of the KLK4, TMPRSS2, and PSA were detected by qRT-PCR. Statistics shown by asterisks above the columns are relative to PBS treatment.



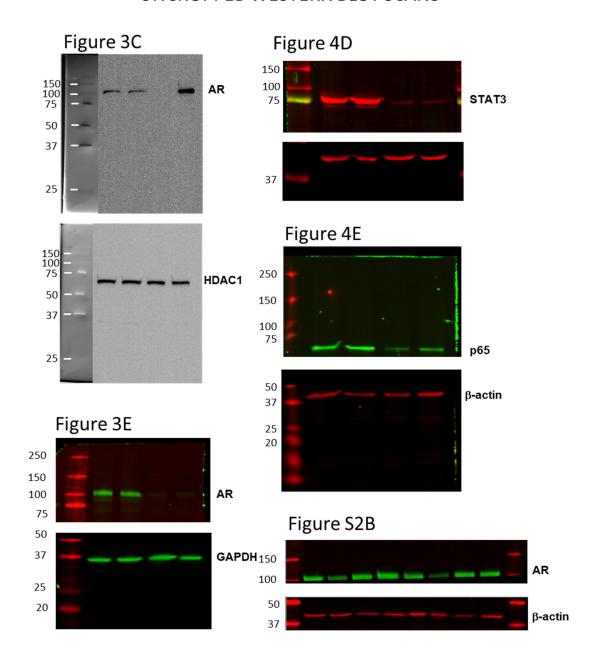


IL-1β IL-6

**Supplementary Figure3:Verification of the small molecule inhibitors.a)**To validate the activity of small molecule inhibitors(AZD1480–JAK1/2/3inhibitor;PD98059–MEK1/2inhibitor;SP600125–JNKinhibitor;SB203580p38MAPKinhibitor)LNCaP cells were treated with the indicated compounds for two hours and induced with 20ng/mLIL6 or IL1B for 35min.Lysates were

harvested and Western blotting was performed.**b)**C42B cells were treated with increasing concentrations of SP600125 for 4 hours and induced with 20ng/mIIL 1b/IL6 combination.45 min after induction with cytokines,cells were harvested and Western blotting was performed.

#### **UNCROPPED WESTERN BLOT SCANS**



#### **UNCROPPED WESTERN BLOT SCANS**

pSTAT3

GAPDH

pSTAT1

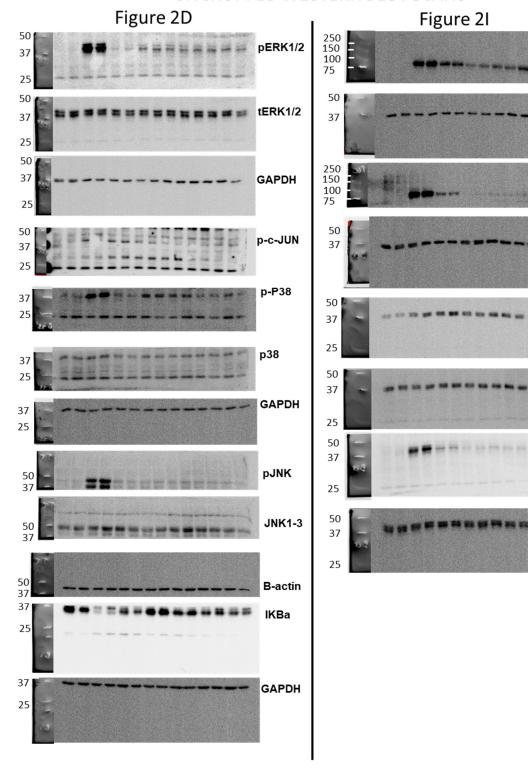
GAPDH

p-P38

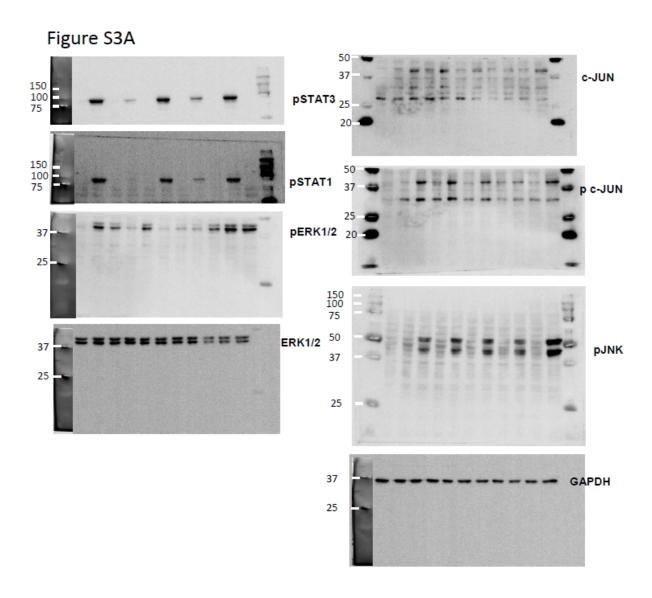
p38

pERK1/2

ERK1/2



#### **UNCROPPED WESTERN BLOT SCANS**



### QUANTIFICATION OF WESTERN BLOTS

Figure 2D

| Lane # | pERK1/2 | ERK1/2 | GAPDH  | p-cJUN | p-p38  | p38    | GAPDH  | pJNK1/3 | JNK1/3 | B-actin | IKBA   | GAPDH  |
|--------|---------|--------|--------|--------|--------|--------|--------|---------|--------|---------|--------|--------|
| 1      | 688.7   | 7625.4 | 7443.2 | 5733.6 | 2538.1 | 3716.0 | 5600.9 | 1263.1  | 3747.2 | 6544.5  | 9736.2 | 5168.3 |
| 2      | 733.2   | 8302.8 | 7202.4 | 4841.1 | 2754.8 | 3827.0 | 6652.1 | 1066.4  | 5625.1 | 5959.4  | 7232.8 | 5540.1 |
| 3      | 10130.1 | 8039.8 | 6105.6 | 7626.0 | 6742.3 | 4241.8 | 4128.3 | 8514.8  | 6268.5 | 4901.8  | 2116.6 | 4213.1 |
| 4      | 9364.1  | 7323.8 | 5331.9 | 1203.5 | 7416.5 | 4850.8 | 5578.7 | 10428.2 | 8932.6 | 6177.2  | 3968.9 | 4651.7 |
| 5      | 976.9   | 6479.3 | 5602.5 | 6000.6 | 3719.2 | 3102.5 | 5204.1 | 1849.7  | 7130.9 | 6034.5  | 6597.9 | 5215.5 |
| 6      | 1093.0  | 5544.4 | 5339.2 | 5962.1 | 2462.2 | 2407.8 | 4059.9 | 1183.3  | 5666.9 | 5242.8  | 4615.6 | 4004.6 |
| 7      | 2552.7  | 6376.7 | 4469.7 | 4050.4 | 4768.9 | 4079.9 | 4652.3 | 1406.7  | 4795.1 | 5286.1  | 8849.2 | 3869.9 |
| 8      | 2847.5  | 6664.6 | 5018.1 | 3742.7 | 4221.9 | 3557.9 | 5142.9 | 1557.7  | 5564.1 | 5471.9  | 9427.4 | 3573.8 |
| 9      | 2557.5  | 6941.0 | 6971.4 | 2213.1 | 3220.8 | 2826.2 | 5158.1 | 1319.6  | 6132.4 | 5564.5  | 7178.6 | 4469.5 |
| 10     | 2513.2  | 6931.1 | 7150.2 | 2427.8 | 4220.1 | 4386.3 | 7258.7 | 2225.8  | 9248.2 | 6406.9  | 7427.1 | 3795.1 |
| 11     | 2716.7  | 7556.7 | 7028.5 | 2341.5 | 2597.0 | 3221.9 | 5406.6 | 2017.9  | 7482.5 | 6252.4  | 5505.8 | 4092.1 |
| 12     | 2763.7  | 6802.4 | 6615.2 | 4496.0 | 3365.4 | 3960.5 | 5326.8 | 1715.8  | 5830.9 | 5838.6  | 6664.1 | 3631.3 |
| 13     | 2729.5  | 7025.2 | 7570.5 | 5148.1 | 3962.8 | 4255.6 | 5715.5 | 1505.8  | 5213.2 | 6258.8  | 4876.8 | 4486.4 |
| 14     | 2424.1  | 4250.5 | 4180.4 | 5208.7 | 1768.8 | 1537.0 | 4231.8 | 670.7   | 2259.4 | 3312.2  | 4148.2 | 2708.5 |
|        |         |        |        |        |        |        |        |         |        |         |        |        |

Figure 21

| Lane # | pSTAT3  | GAPDH  | pSTAT1  | GAPDH   | pP38   | p38    | GAPDH  | pERK1/2 | ERK1/2 | GAPDH   |
|--------|---------|--------|---------|---------|--------|--------|--------|---------|--------|---------|
| 1      | 192.7   | 6188.7 | 807.2   | 8190.0  | 929.8  | 3897.9 | 6188.7 | 741.6   | 3377.2 | 8190.0  |
| 2      | 152.3   | 6078.3 | 943.9   | 7864.9  | 1295.5 | 4330.8 | 6078.3 | 940.5   | 4027.5 | 7864.9  |
| 3      | 9814.1  | 4869.4 | 10691.4 | 8660.7  | 2623.8 | 3544.6 | 4869.4 | 8708.0  | 4370.2 | 8660.7  |
| 4      | 10105.4 | 5482.3 | 10656.5 | 7596.4  | 3805.9 | 3814.6 | 5482.3 | 9532.2  | 5254.6 | 7596.4  |
| 5      | 4328.6  | 5729.7 | 2050.3  | 7060.9  | 3730.6 | 4056.9 | 5729.7 | 2690.1  | 5624.4 | 7060.9  |
| 6      | 4119.2  | 5103.1 | 1876.7  | 6620.9  | 5143.7 | 4301.5 | 5103.1 | 2142.6  | 5386.7 | 6620.9  |
| 7      | 1003.8  | 5102.6 | 689.3   | 6910.6  | 3210.1 | 3517.1 | 5102.6 | 776.8   | 4951.0 | 6910.6  |
| 8      | 1799.2  | 5674.4 | 810.4   | 10047.0 | 3030.6 | 4153.4 | 5674.4 | 1019.2  | 5764.0 | 10047.0 |
| 9      | 2845.3  | 6308.4 | 567.4   | 9674.6  | 3955.6 | 4402.5 | 6308.4 | 1388.4  | 6205.5 | 9674.6  |
| 10     | 2470.3  | 7803.7 | 459.6   | 8599.1  | 3799.6 | 5069.6 | 7803.7 | 1230.5  | 5092.3 | 8599.1  |
| 11     | 4828.9  | 7666.1 | 605.3   | 6919.2  | 3173.3 | 4439.0 | 7666.1 | 1313.9  | 3929.2 | 6919.2  |
| 12     | 2858.9  | 1393.2 | 1304.4  | 5215.7  | 209.7  | 1521.9 | 1393.2 | 1042.5  | 4005.1 | 5215.7  |

# Figure 3C

| Lane # | AR      | HDAC1   |  |  |
|--------|---------|---------|--|--|
| 1      | 6402.3  | 16316.0 |  |  |
| 2      | 7395.3  | 19548.1 |  |  |
| 3      | 1652.7  | 17683.0 |  |  |
| 4      | 20386.9 | 16516.7 |  |  |

### Figure 3E

| Lane # | AR      | GAPDH   |  |  |  |
|--------|---------|---------|--|--|--|
| 1      | 23273.0 | 11678.8 |  |  |  |
| 2      | 22514.2 | 12507.2 |  |  |  |
| 3      | 2263.5  | 15103.3 |  |  |  |
| 4      | 2562.8  | 9550.2  |  |  |  |

#### Figure 4D

| Lane # | STAT3   | B-actin |  |  |
|--------|---------|---------|--|--|
| 1      | 27509.5 | 18705.4 |  |  |
| 2      | 26695.3 | 11297.6 |  |  |
| 3      | 1474.4  | 19290.1 |  |  |
| 4      | 1789.6  | 16773.8 |  |  |

### Figure 4E

| Lane # | p65     | B-actin |  |  |
|--------|---------|---------|--|--|
| 1      | 27224.3 | 25463.5 |  |  |
| 2      | 32867.1 | 14134.1 |  |  |
| 3      | 7769.7  | 18253.1 |  |  |
| 4      | 12807.3 | 30114.7 |  |  |

# Figure S2

| Lane # | AR     | B-actin |  |  |
|--------|--------|---------|--|--|
| 1      | 4808.1 | 2913.2  |  |  |
| 2      | 2474.3 | 2899.0  |  |  |
| 3      | 5573.9 | 2047.4  |  |  |
| 4      | 6839.0 | 2990.7  |  |  |
| 5      | 4574.5 | 3225.1  |  |  |
| 6      | 1419.6 | 2499.5  |  |  |
| 7      | 5215.2 | 1423.5  |  |  |
| 8      | 4921.8 | 3176.4  |  |  |
|        |        |         |  |  |