Fig 1A

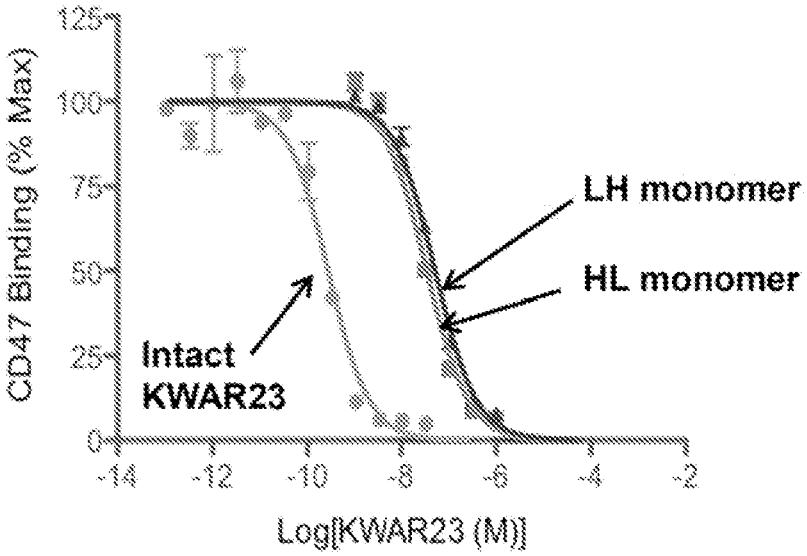


FIG 1B

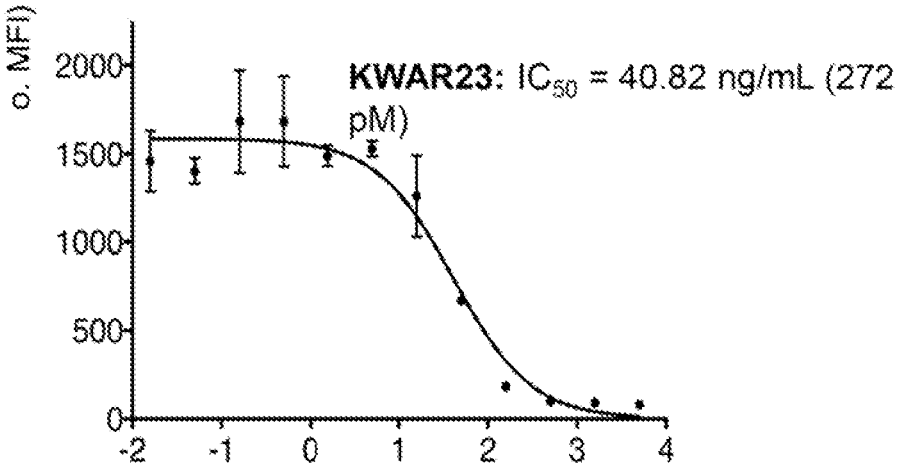


Fig 1C

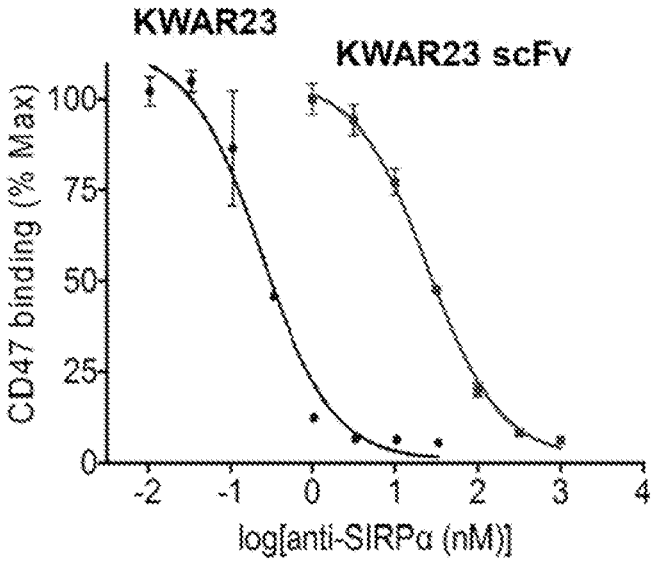


Fig 2A

Cetuximab
(DLD-1 cells)

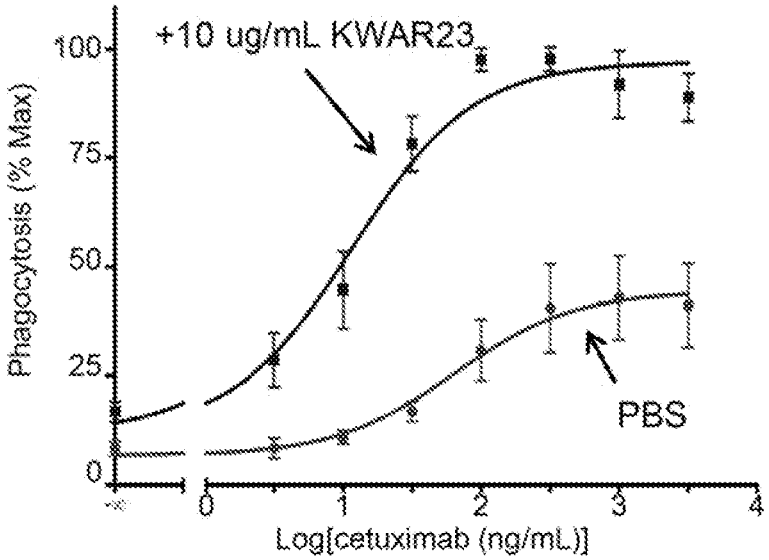


Fig 2B

Trastuzumab
(SKBR3 cells)

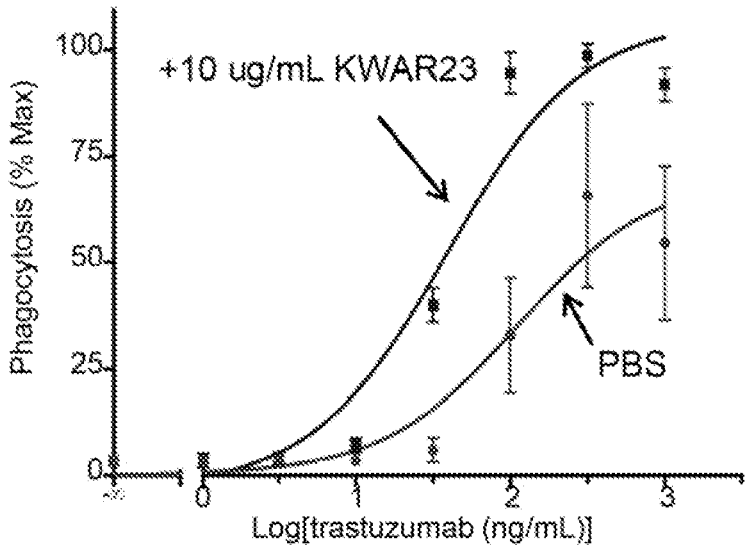


Fig 2C

Rituximab
(Raji cells)

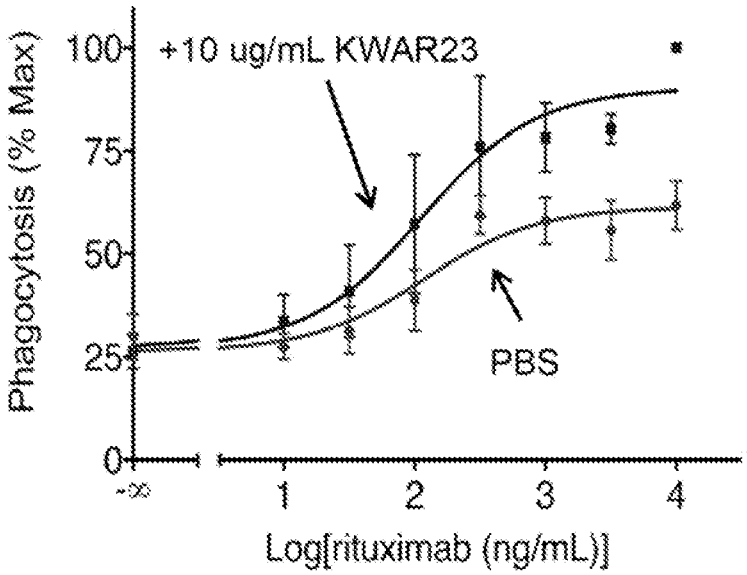


Fig 3A

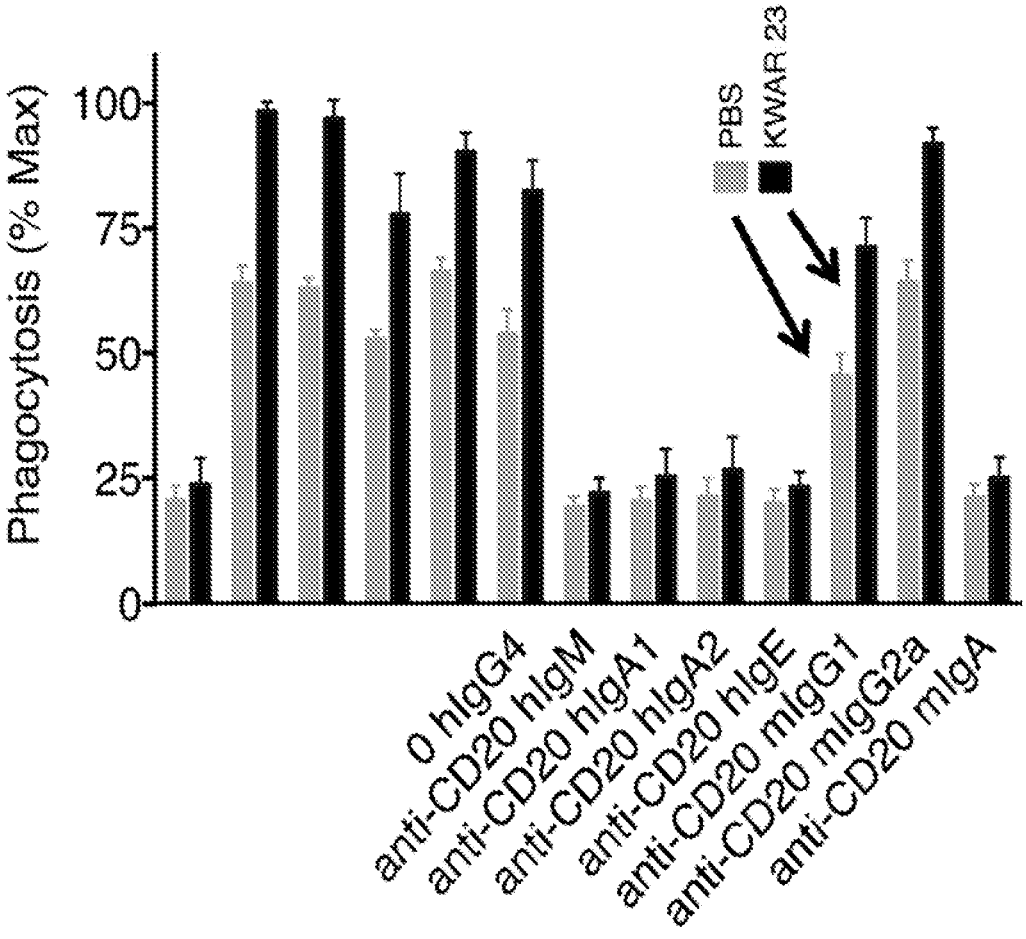

Phagocytosis (% Max)
100
75
50
25
0
PBS
KWAR 23
0 hIgG4
anti-CD20 hIgM
anti-CD20 hIgA1
anti-CD20 hIgA2
anti-CD20 hIgE
anti-CD20 mIgG1
anti-CD20 mIgG2a
anti-CD20 mIgA

Fig 3B

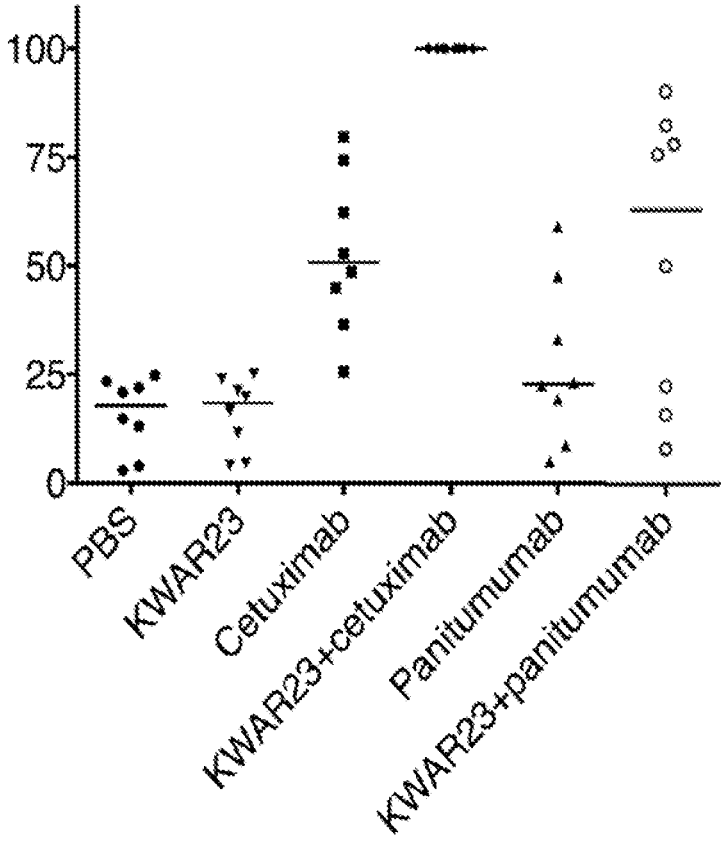

100
75
50
25
0
PBS
KWAR23
Cetuximab
KWAR23+cetuximab
Panitumumab
KWAR23+panitumumab

Fig 4A

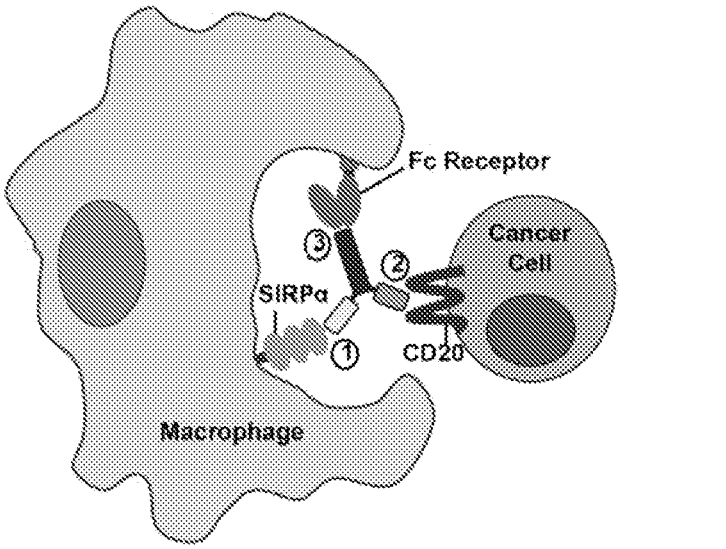
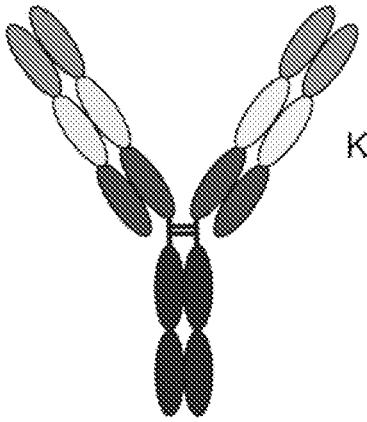

Bispecific Macrophage Enhacing (BiME) antibodies
Fc Receptor
Cancer Cell
SIRPα
CD20
Macrophage
1
2
3

Fig 4B



DVD-Ig
(Dual Variable Domain)

Fig 4C

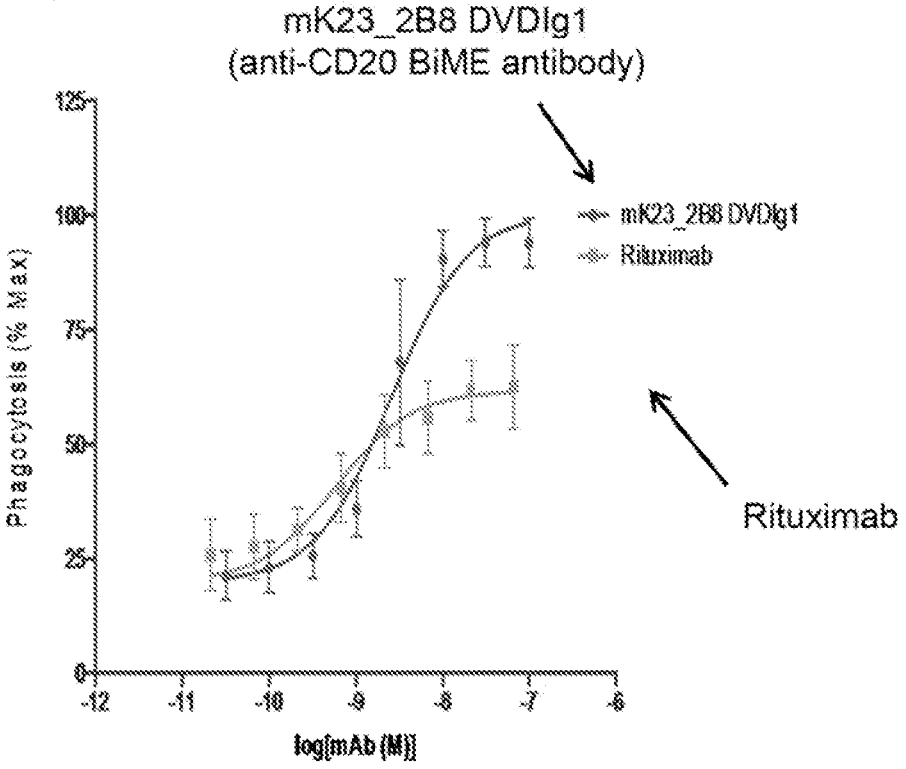


Fig 5A

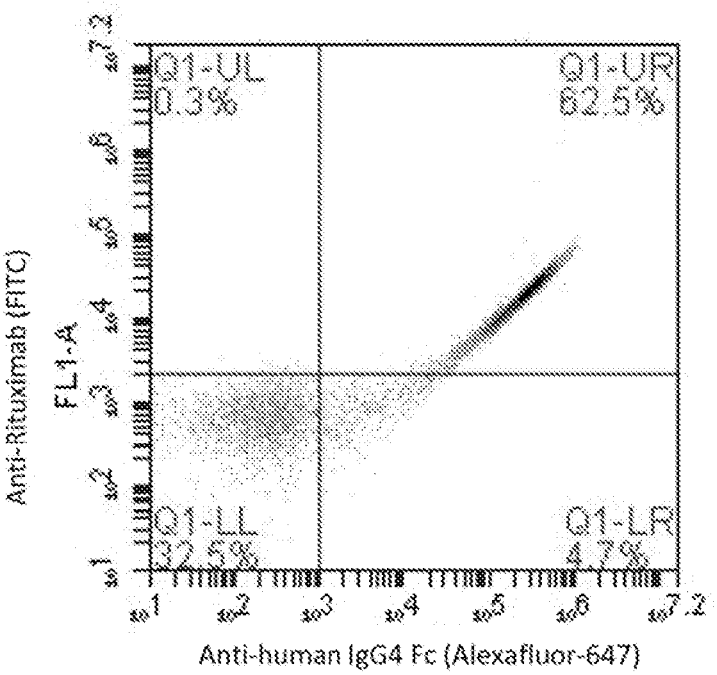
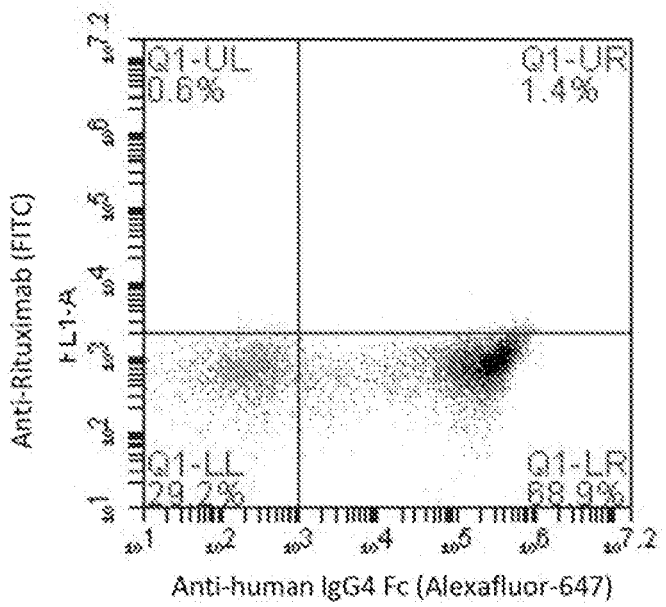

Q1-UL
0.3%
Q1-UR
62.5%
Q1-LL
32.5%
Q1-LR
4.7%
Anti-Rituximab (FITC)
FL1-A
Anti-human IgG4 Fc (Alexafluor-647)

Fig 5B


Q1-UL
0.6%
Q1-UR
1.4%
Q1-LL
29.2%
Q1-LR
68.9%
Anti-Rituximab (FITC)
FL1-A
Anti-human IgG4 Fc (Alexafluor-647)

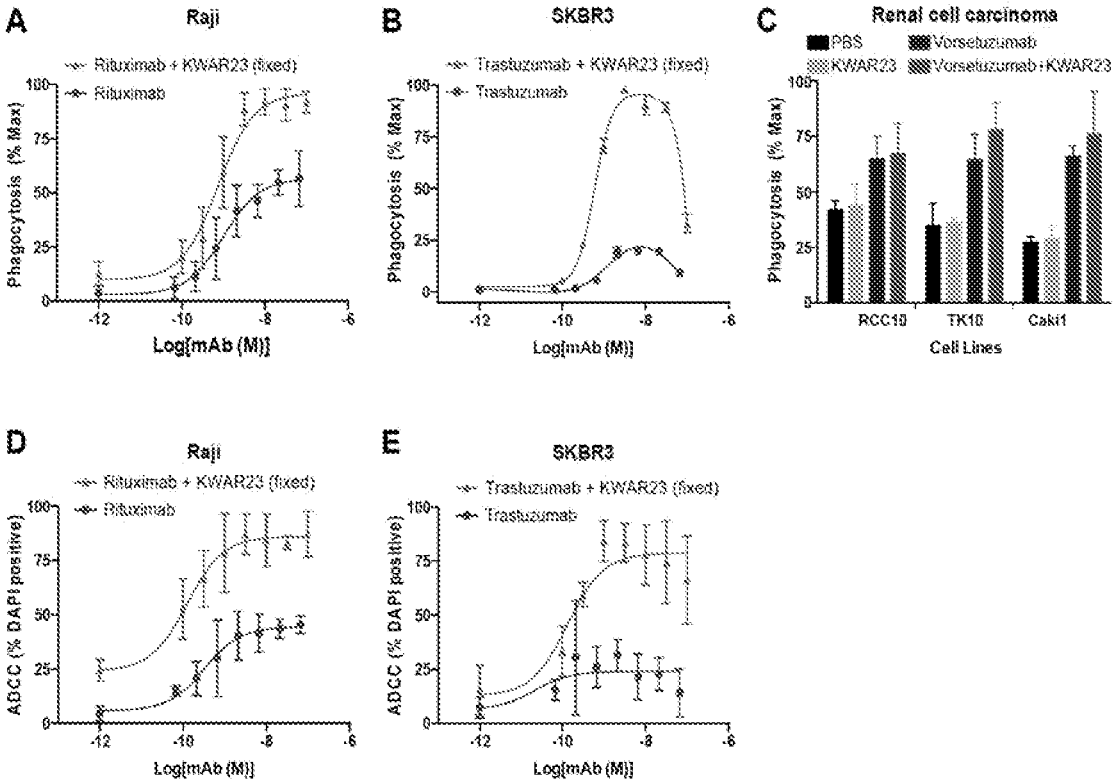

A
Raji
Rituximab + KWAR23 (fixed)
Rituximab
Phagocytosis (% Max)
Log[mAb (M)]
B
SKBR3
Trastuzumab + KWAR23 (fixed)
Trastuzumab
Phagocytosis (% Max)
Log[mAb (M)]
C
Renal cell carcinoma
PBS
Vorsetuzumab
KWAR23
Vorsetuzumab+KWAR23
Phagocytosis (% Max)
RCC10
TK10
Caki1
Cell Lines
D
Raji
Rituximab + KWAR23 (fixed)
Rituximab
ADCC (% DAPI positive)
Log[mAb (M)]
E
SKBR3
Trastuzumab + KWAR23 (fixed)
Trastuzumab
ADCC (% DAPI positive)
Log[mAb (M)]

Figure 6

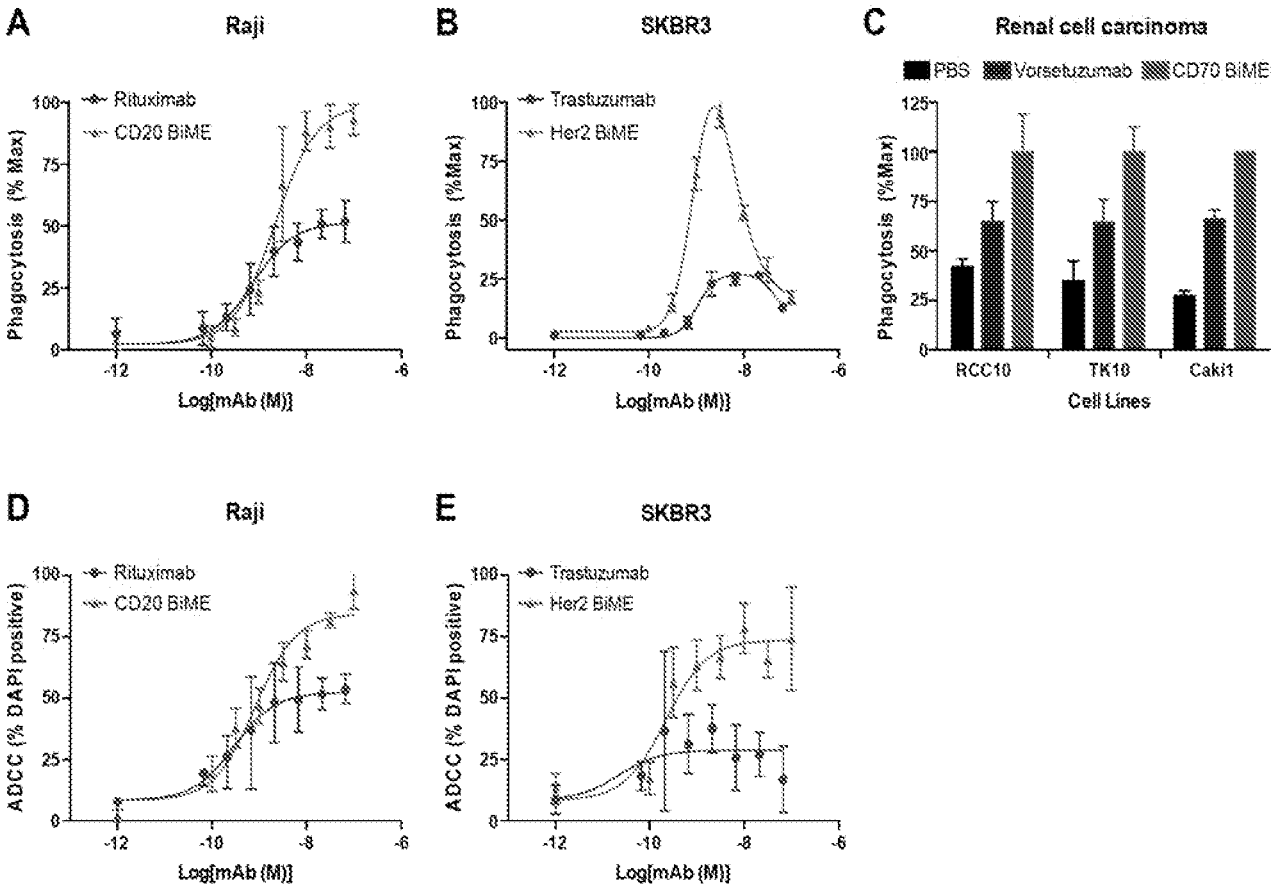

A
Raji
Rituximab
CD20 BiME
Phagocytosis (% Max)
Log[mAb (M)]
B
SKBR3
Trastuzumab
Her2 BiME
Phagocytosis (%Max)
Log[mAb (M)]
C
Renal cell carcinoma
PBS
Vorsetuzumab
CD70 BiME
Phagocytosis (%Max)
RCC10
TK10
Caki1
Cell Lines
D
Raji
Rituximab
CD20 BiME
ADCC (% DAPI positive)
Log[mAb (M)]
E
SKBR3
Trastuzumab
Her2 BiME
ADCC (% DAPI positive)
Log[mAb (M)]

FIGURE 7

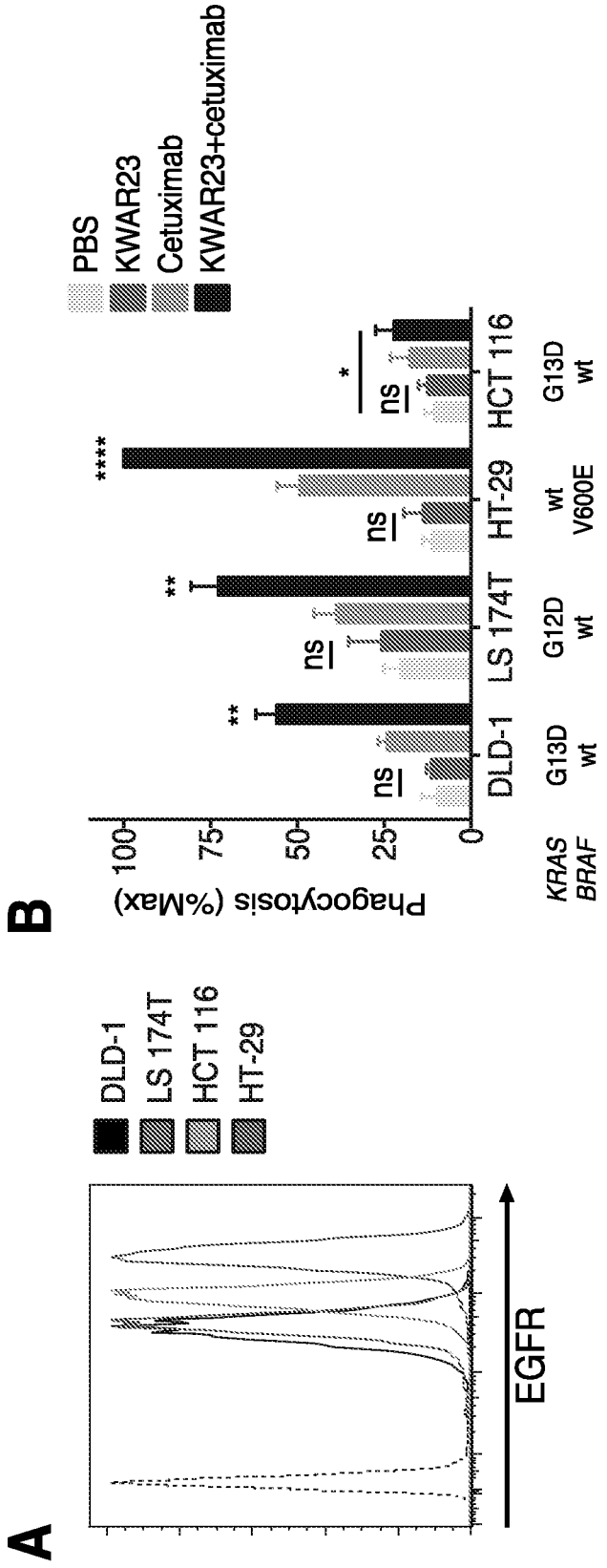

A
DLD-1
LS 174T
HCT 116
HT-29
EGFR
B
PBS
KWAR23
Cetuximab
KWAR23+cetuximab
Phagocytosis (%Max)
100
75
50
25
0
ns
**
ns
**
ns
****
ns
*
DLD-1
LS 174T
HT-29
HCT 116
KRAS
BRAF
G13D
wt
G12D
wt
wt
V600E
G13D
wt

FIGURE 8

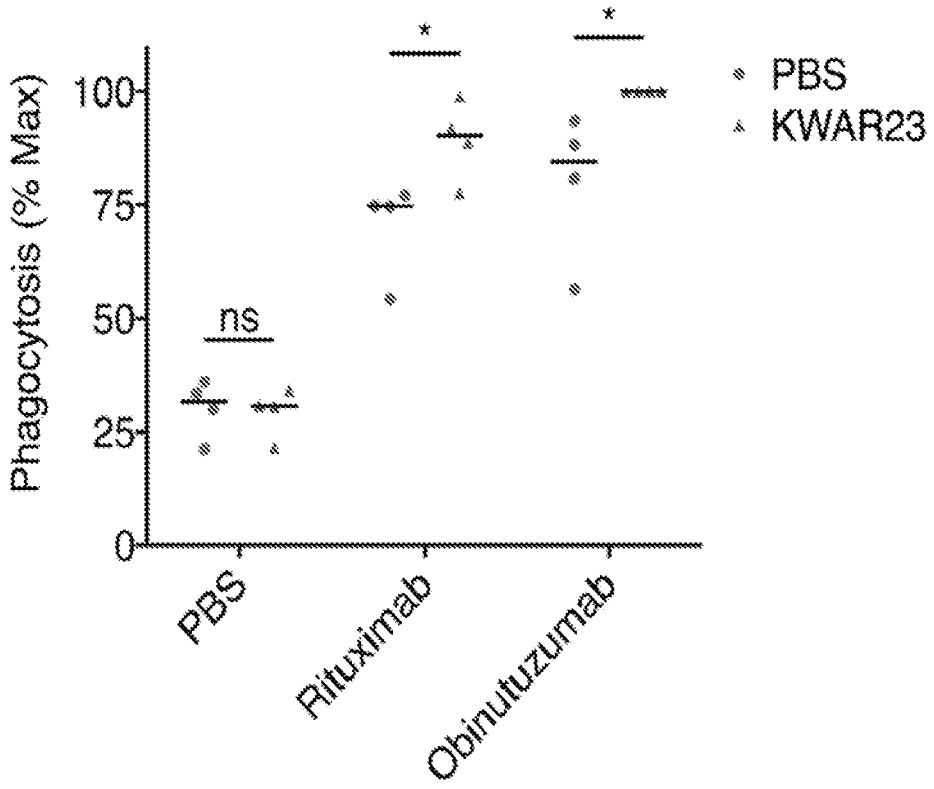

Phagocytosis (% Max)
100
75
50
25
0
ns
*
*
PBS
KWAR23
PBS
Rituximab
Obinutuzumab

FIGURE 9