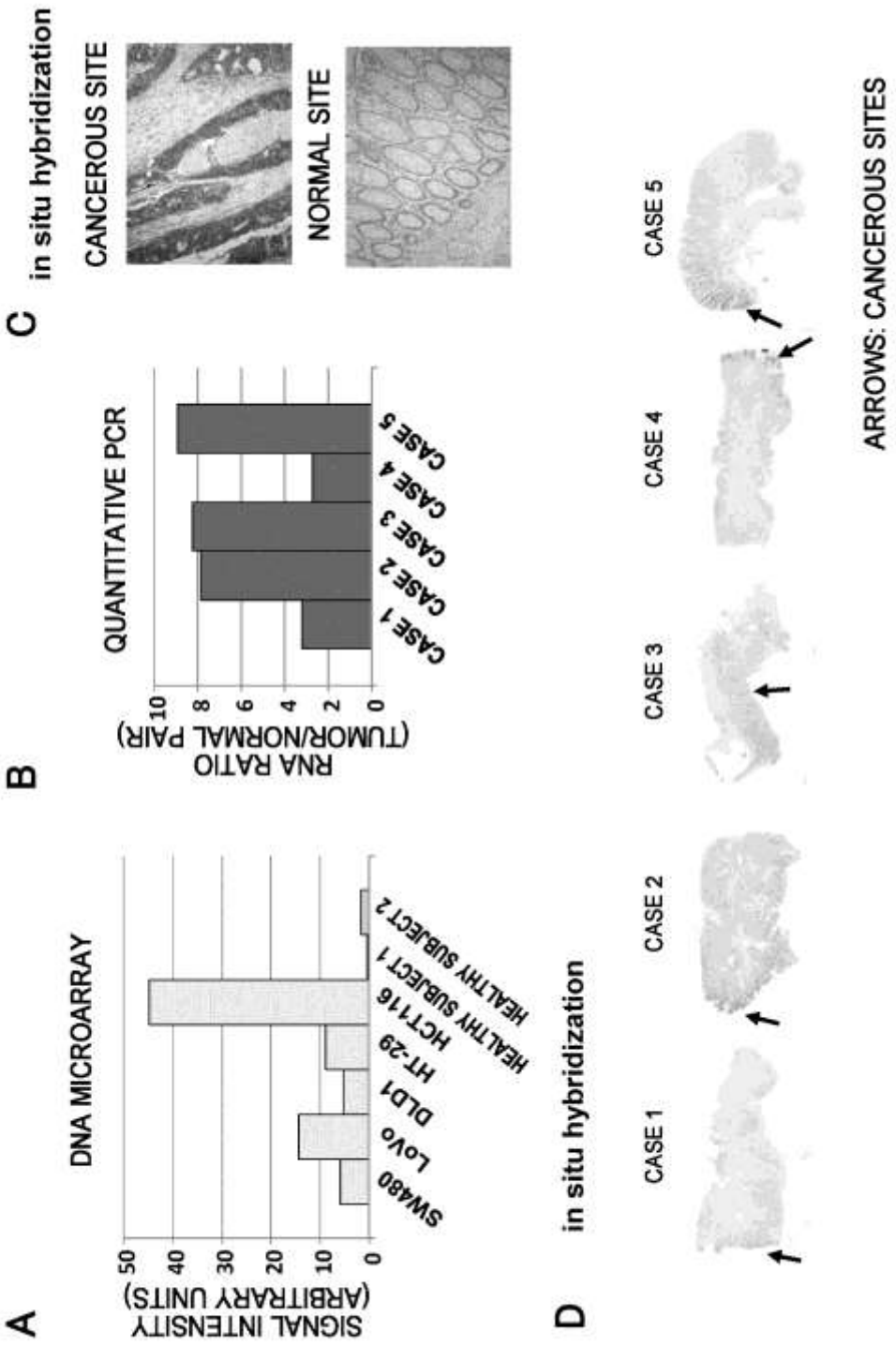
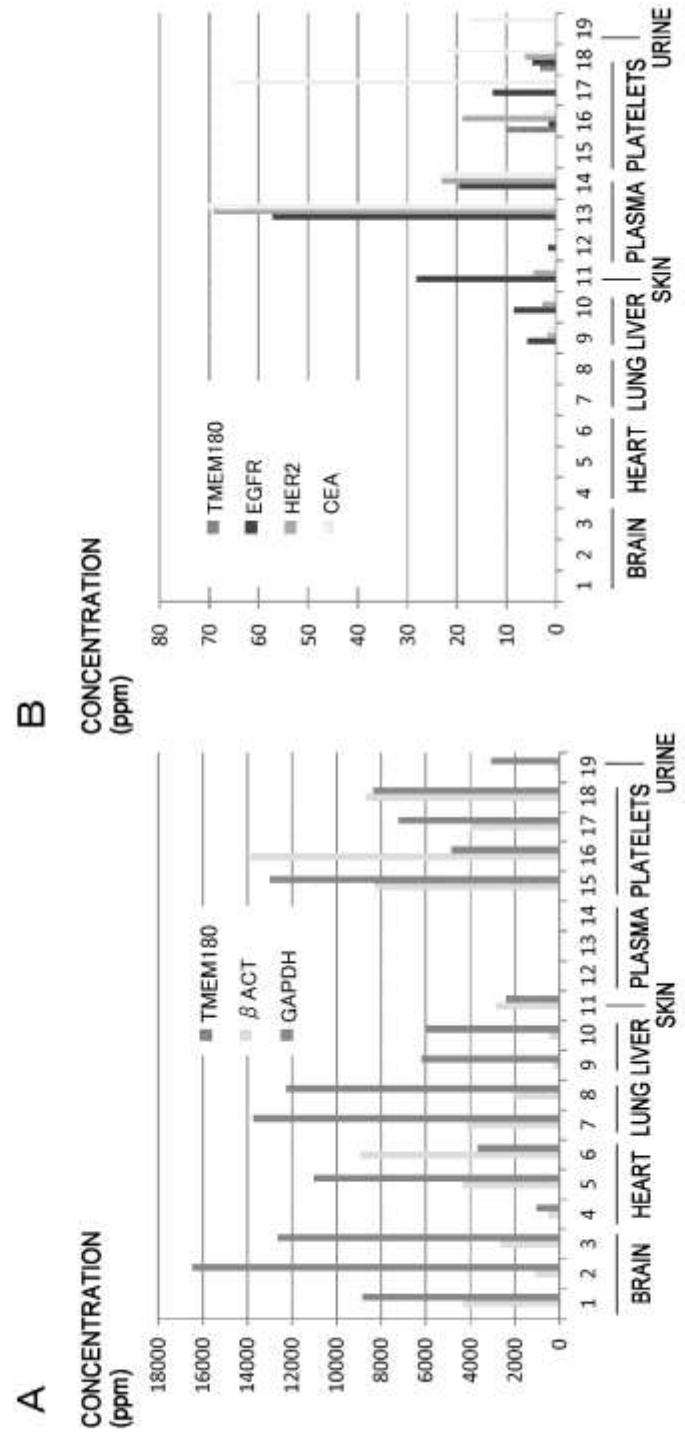
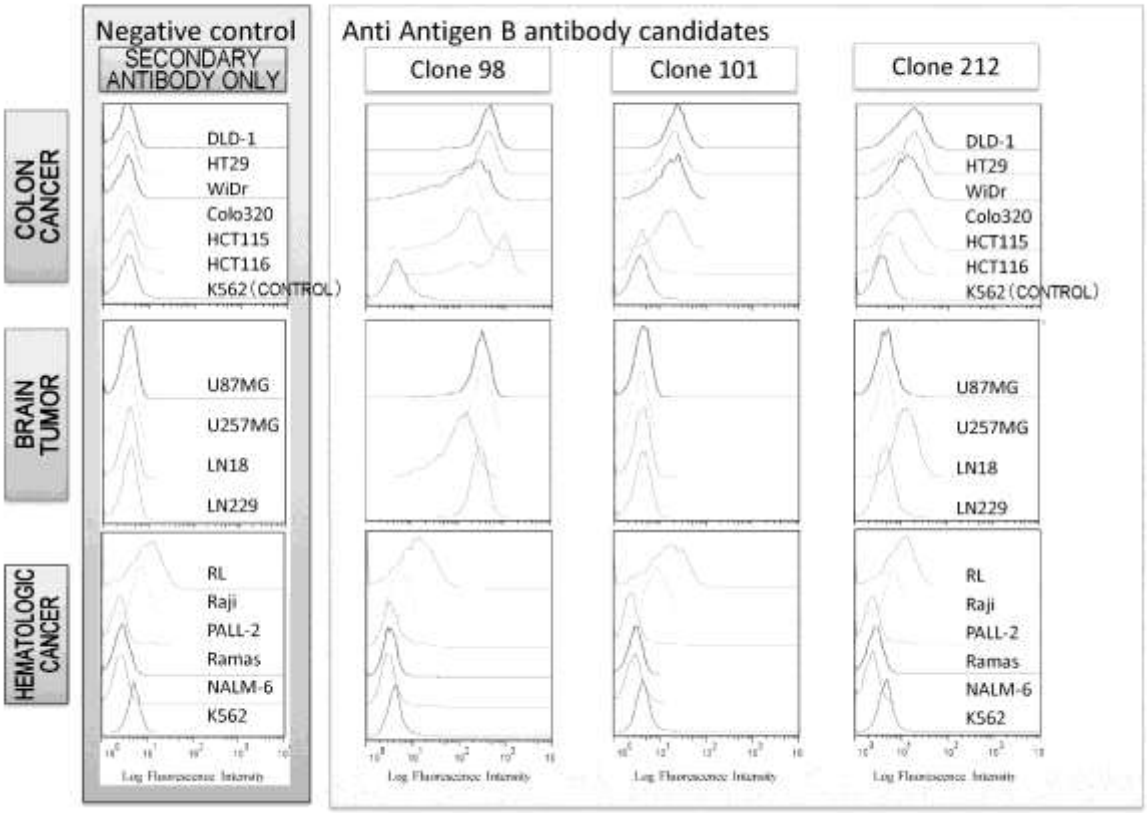
[Fig. 1]


A
DNA MICROARRAY
SIGNAL INTENSITY (ARBITRARY UNITS)
0
10
20
30
40
50
SW480
LoVo
DLD1
HT-29
HCT116
HEALTHY SUBJECT 1
HEALTHY SUBJECT 2
B
QUANTITATIVE PCR
RNA RATIO (TUMOR/NORMAL PAIR)
0
2
4
6
8
10
CASE 1
CASE 2
CASE 3
CASE 4
CASE 5
C
in situ hybridization
CANCEROUS SITE
NORMAL SITE
D
in situ hybridization
CASE 1
CASE 2
CASE 3
CASE 4
CASE 5
ARROWS: CANCEROUS SITES

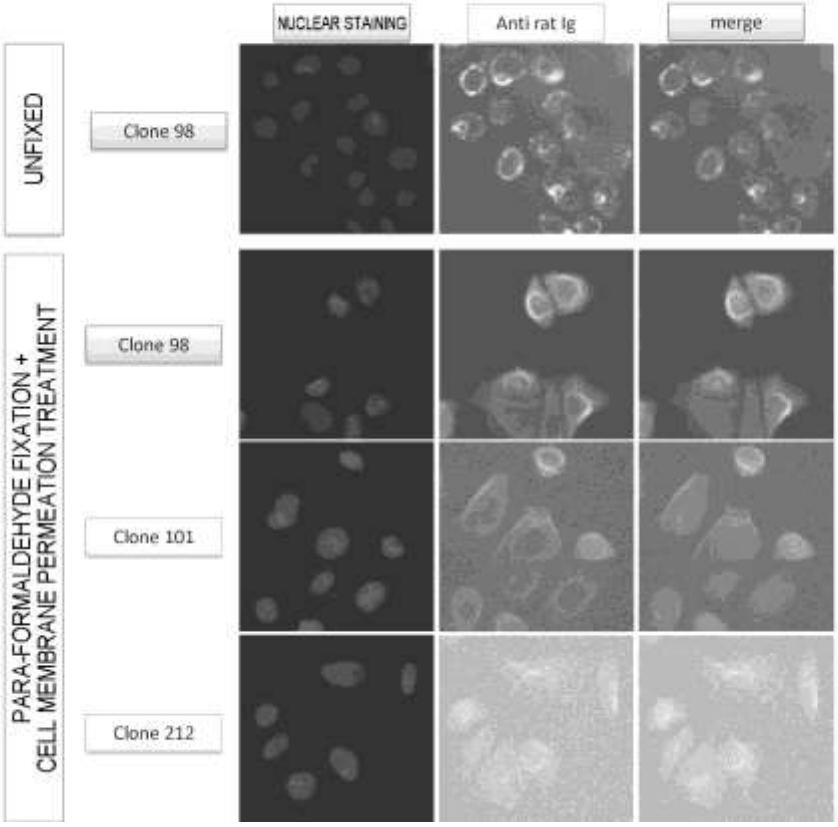
[Fig. 2]


A
CONCENTRATION (ppm)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
TMEM180
β ACT
GAPDH
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
BRAIN HEART LUNG LIVER SKIN PLASMA PLATELETS URINE
B
CONCENTRATION (ppm)
80
70
60
50
40
30
20
10
0
TMEM180
EGFR
HER2
CEA
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
BRAIN HEART LUNG LIVER SKIN PLASMA PLATELETS URINE

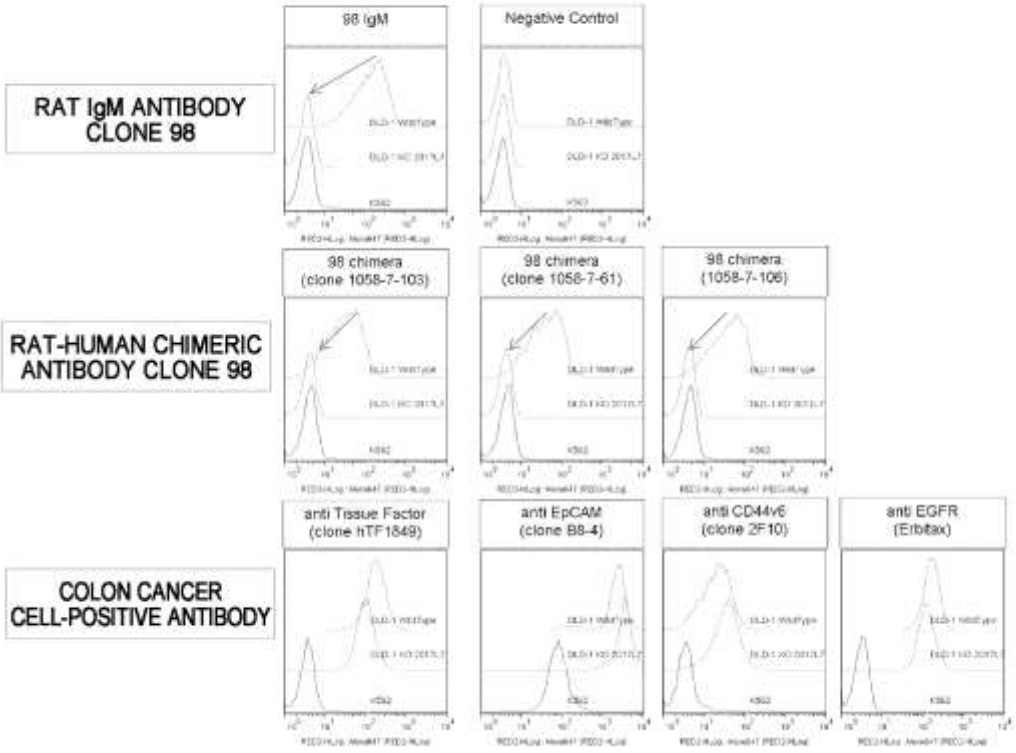
[Fig. 3]


Negative control
SECONDARY ANTIBODY ONLY
Anti Antigen B antibody candidates
Clone 98
Clone 101
Clone 212
COLON CANCER
BRAIN TUMOR
HEMATOLOGIC CANCER
DLD-1
HT29
WiDr
Colo320
HCT115
HCT116
K562(CONTROL)
U87MG
U257MG
LN18
LN229
RL
Raji
PALL-2
Ramas
NALM-6
K562
Log Fluorescence Intensity

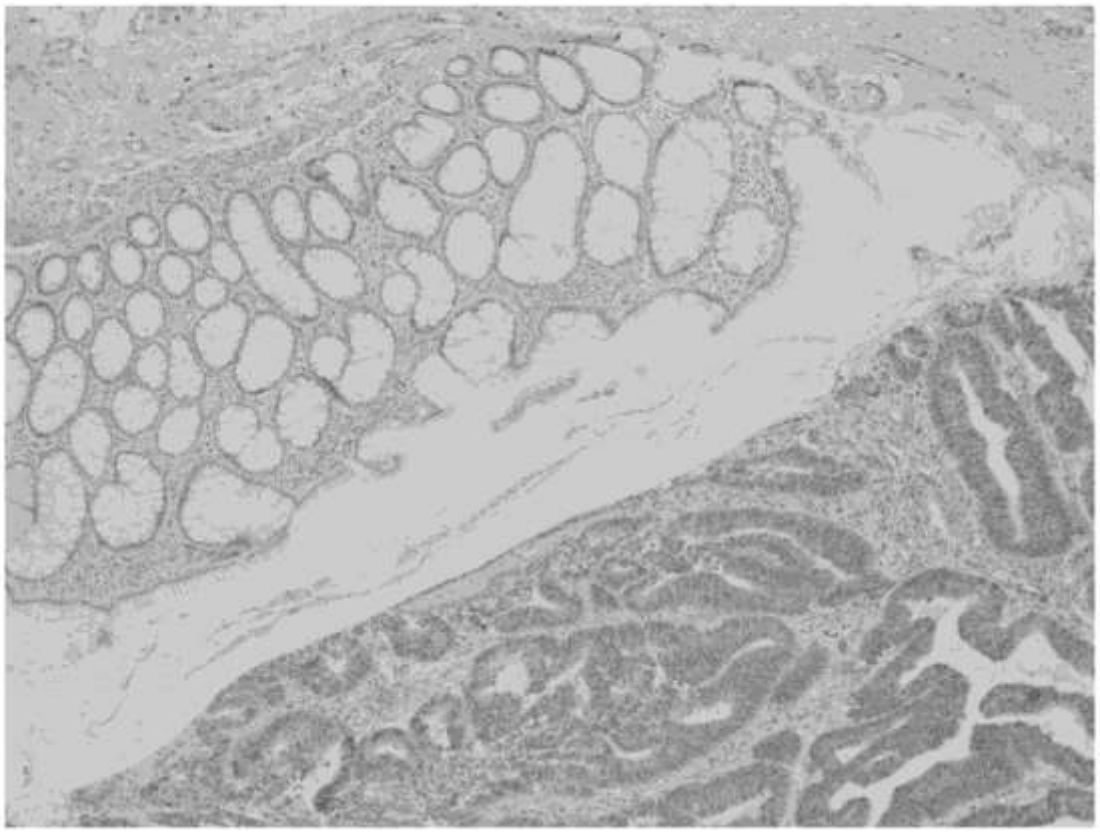
[Fig. 4]


NUCLEAR STAINING
Anti rat Ig
merge
UNFIXED
Clone 98
PARA-FORMALDEHYDE FIXATION +
CELL MEMBRANE PERMEATION TREATMENT
Clone 98
Clone 101
Clone 212

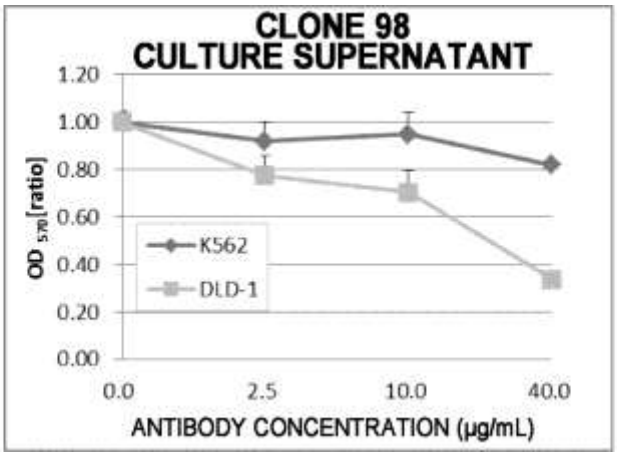
[Fig. 5]


RAT IgM ANTIBODY CLONE 98
98 IgM
Negative Control
RAT-HUMAN CHIMERIC ANTIBODY CLONE 98
98 chimera (clone 1058-7-103)
98 chimera (clone 1058-7-61)
98 chimera (1058-7-106)
COLON CANCER CELL-POSITIVE ANTIBODY
anti Tissue Factor (clone hTF1849)
anti EpCAM (clone B8-4)
anti CD44v6 (clone 2F10)
anti EGFR (Erbitax)

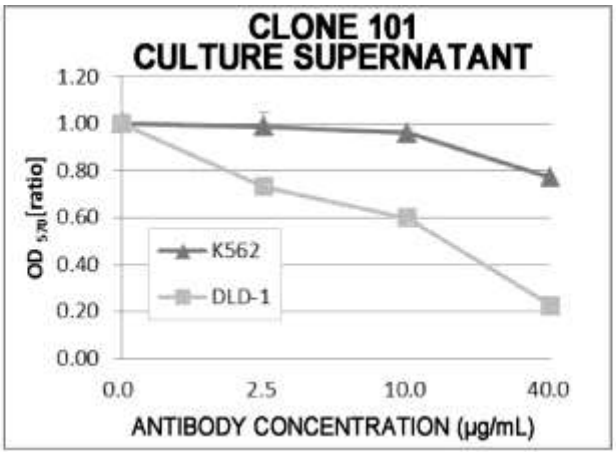
[Fig. 6]



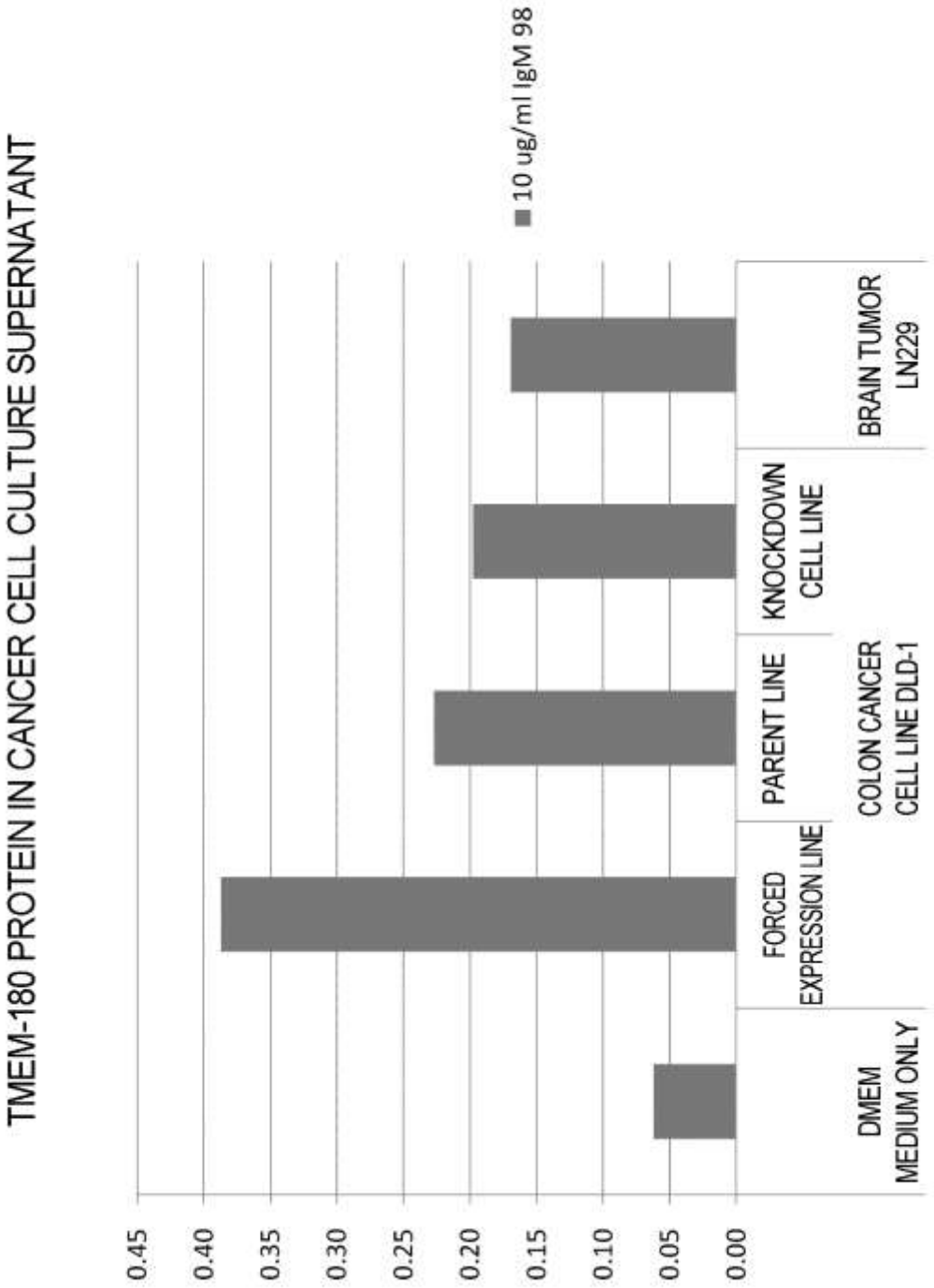
[Fig. 7]


CLONE 98
CULTURE SUPERNATANT
1.20
1.00
0.80
0.60
0.40
0.20
0.00
OD 570 [ratio]
K562
DLD-1
0.0
2.5
10.0
40.0
ANTIBODY CONCENTRATION (μg/mL)

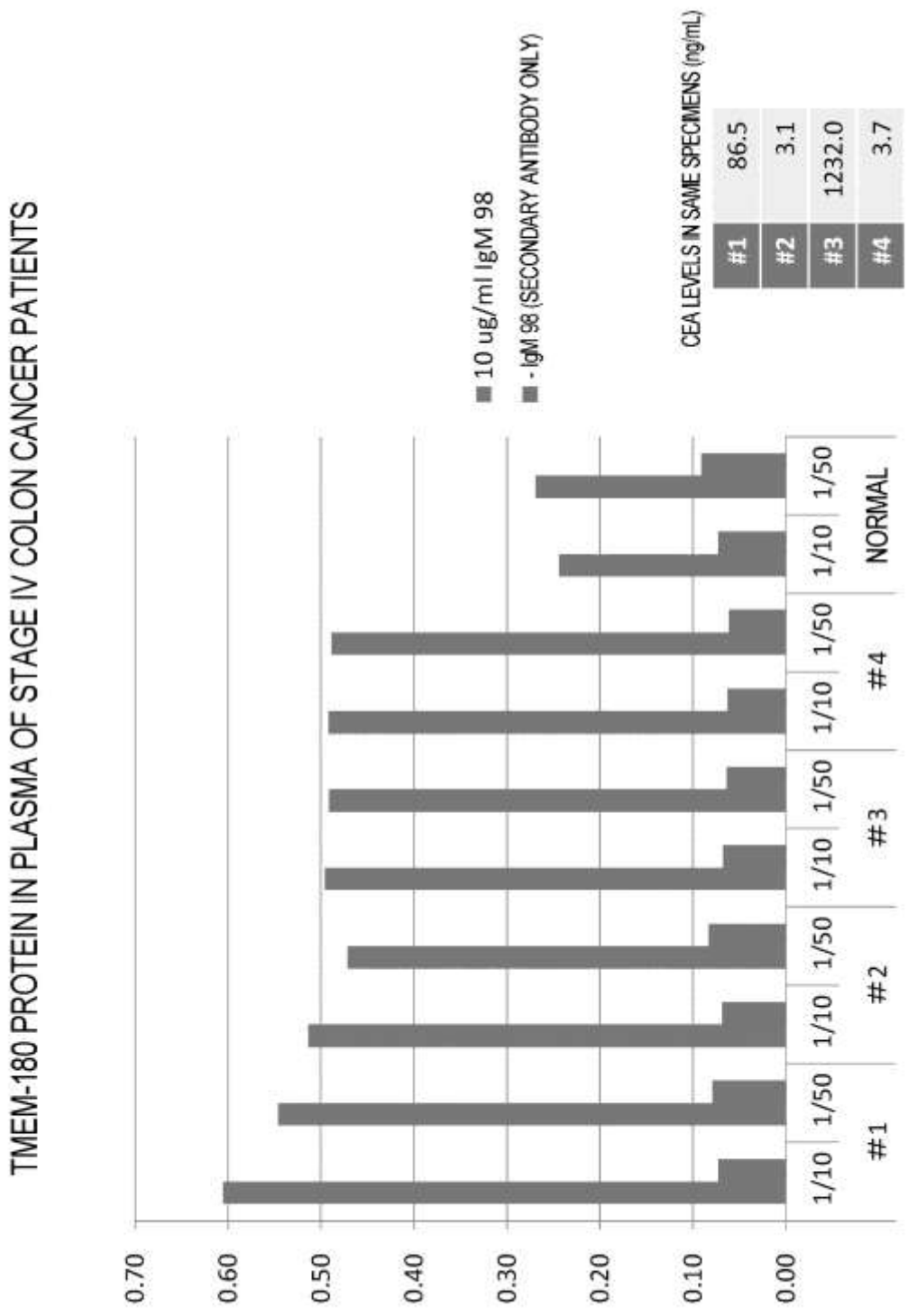
[Fig. 8]


CLONE 101
CULTURE SUPERNATANT
1.20
1.00
0.80
0.60
0.40
0.20
0.00
OD 570 [ratio]
K562
DLD-1
0.0
2.5
10.0
40.0
ANTIBODY CONCENTRATION (μg/mL)

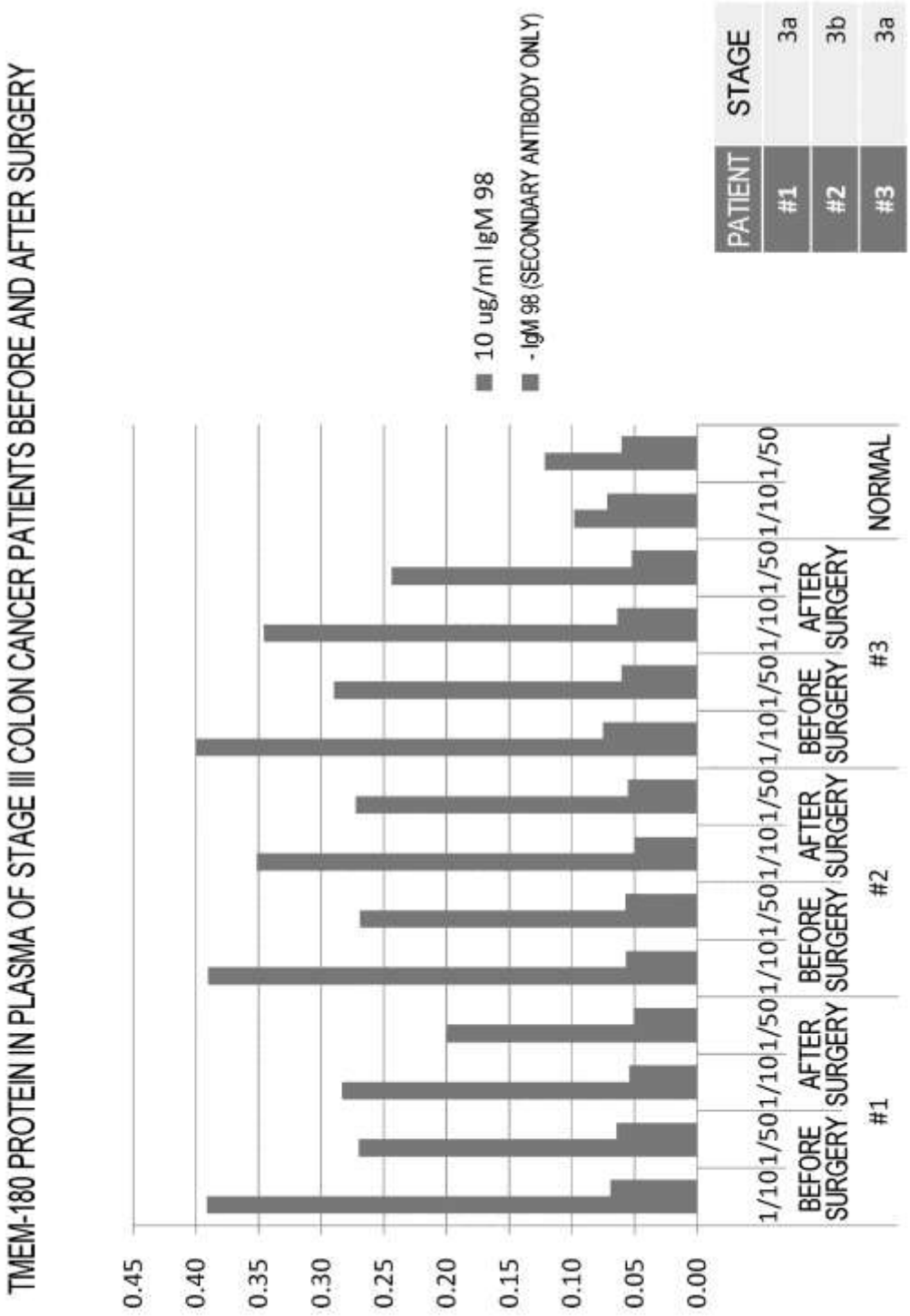
[Fig. 9]


TMEM-180 PROTEIN IN CANCER CELL CULTURE SUPERNATANT
10 ug/ml IgM 98
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
DMEM MEDIUM ONLY
FORCED EXPRESSION LINE
PARENT LINE
KNOCKDOWN CELL LINE
COLON CANCER CELL LINE DLD-1
BRAIN TUMOR LN229

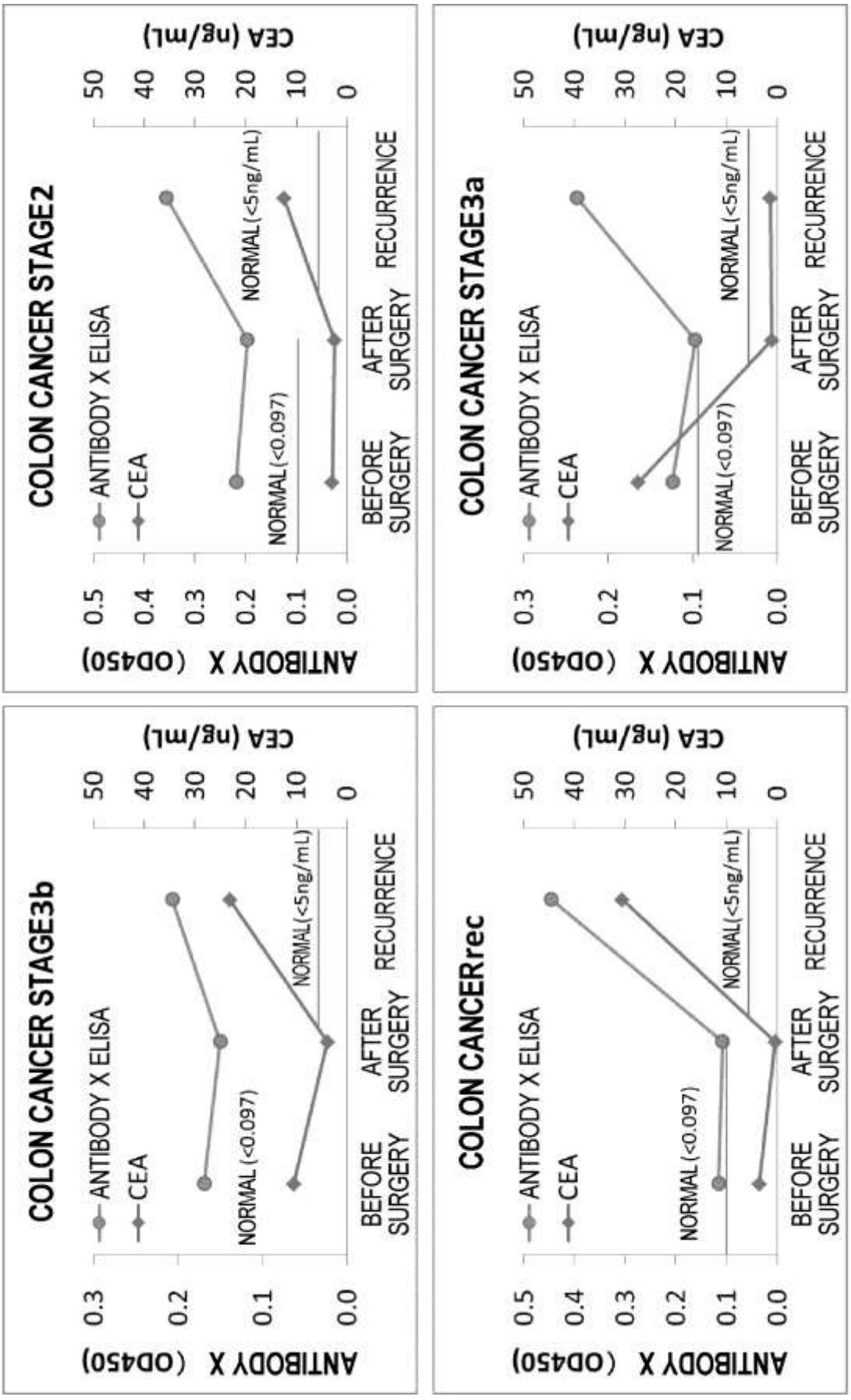
[Fig. 10]


TMEM-180 PROTEIN IN PLASMA OF STAGE IV COLON CANCER PATIENTS
10 ug/ml IgM 98
- IgM 98 (SECONDARY ANTIBODY ONLY)
CEA LEVELS IN SAME SPECIMENS (ng/mL)
#1 86.5
#2 3.1
#3 1232.0
#4 3.7
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
1/10
1/50
1/10
1/50
1/10
1/50
1/10
1/50
1/10
1/50
#1
#2
#3
#4
NORMAL

[Fig. 11]


TMEM-180 PROTEIN IN PLASMA OF STAGE III COLON CANCER PATIENTS BEFORE AND AFTER SURGERY
10 ug/ml IgM 98
- IgM 98 (SECONDARY ANTIBODY ONLY)
PATIENT
STAGE
#1
3a
#2
3b
#3
3a
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
1/10
1/50
1/10
1/50
1/10
1/50
1/10
1/50
1/10
1/50
BEFORE SURGERY
AFTER SURGERY
BEFORE SURGERY
AFTER SURGERY
BEFORE SURGERY
AFTER SURGERY
NORMAL
#1
#2
#3

[Fig. 12]


COLON CANCER STAGE2
COLON CANCER STAGE3a
COLON CANCER STAGE3b
COLON CANCERrec
ANTIBODY X ELISA
CEA
ANTIBODY X (OD450)
CEA (ng/mL)
NORMAL(<0.097)
NORMAL(<5ng/mL)
BEFORE SURGERY
AFTER SURGERY
RECURRENCE