**Vitamin D receptor promotes healthy microbial metabolites and microbiome**

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**Running title:** Loss of VDR alters microbial metabolites.

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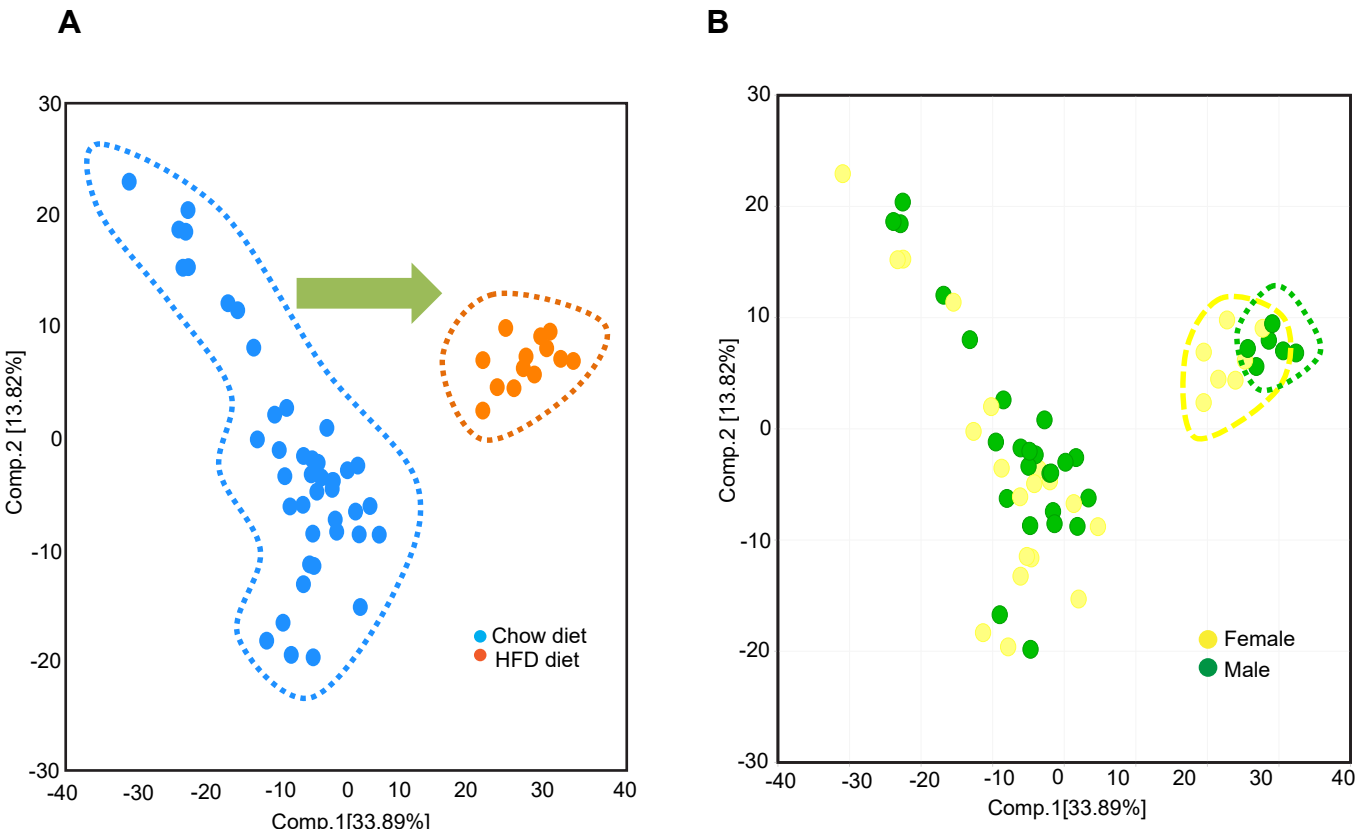
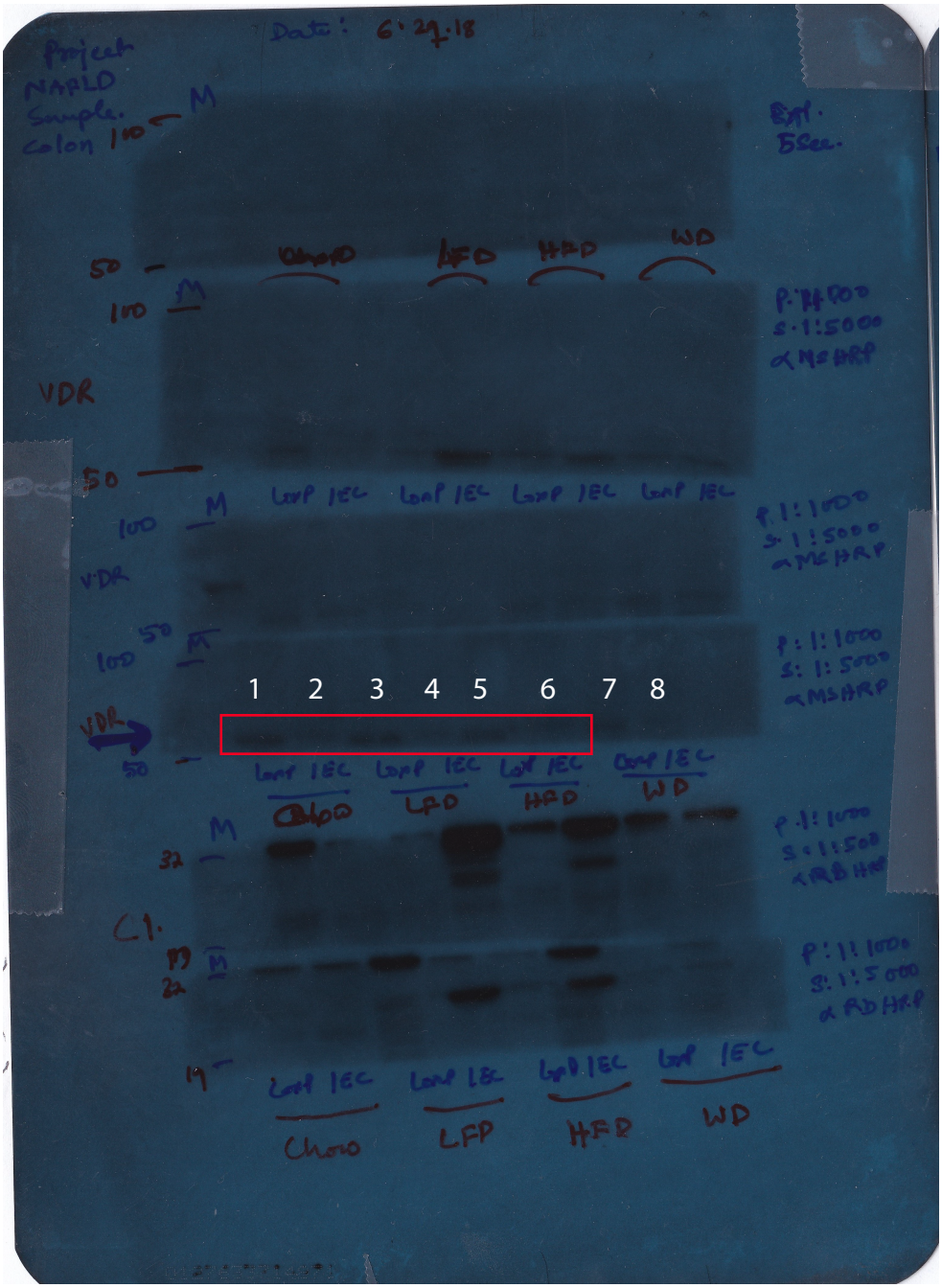
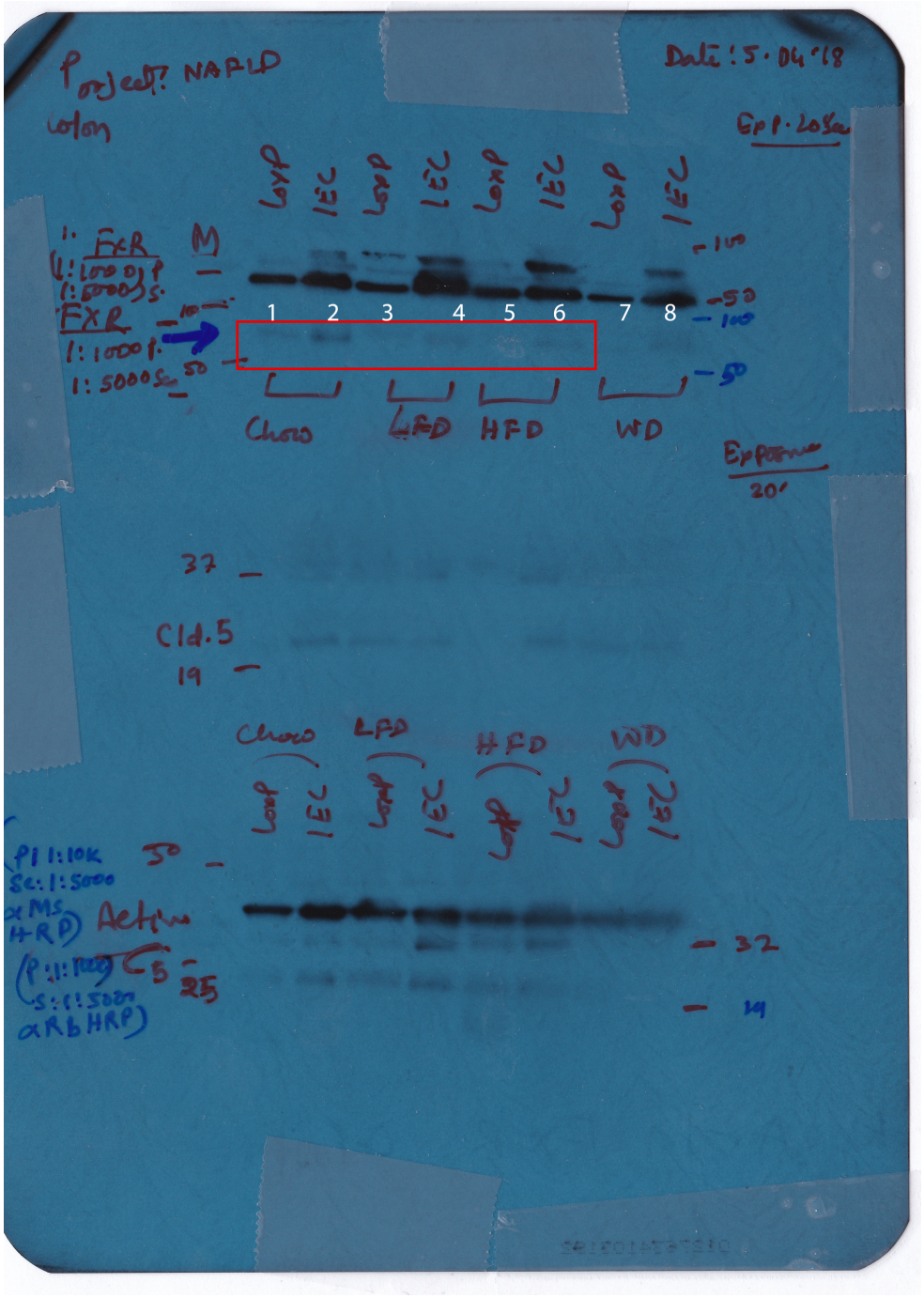
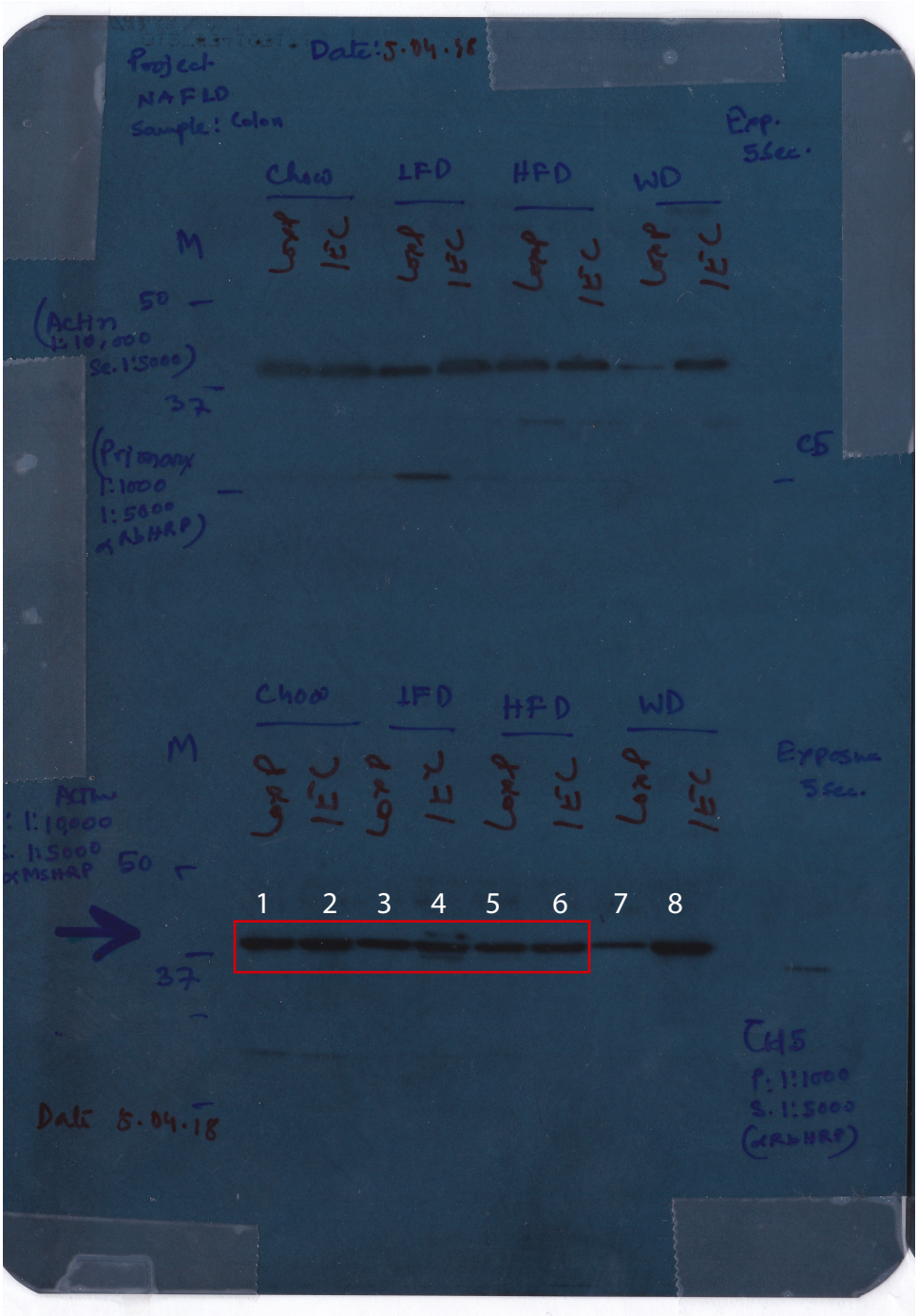
**Supplementary Figure 1: PCA assessing all fecal samples show significant separation based on the (A) diet and (B) gender, each group is indicated by specific colors as mentioned in the inset. Arrow indicates the shift of group.**



## Original Images of western blots for Fig. 10


Project
NAFLD
Sample.
Colon
Date: 6.29.18
M
100
50
VDR
Chow
LFD
HFD
WD
Lamina propria IEC
P: 1:1000
S: 1:5000
αMS HRP
αRB HRP
1 2 3 4 5 6 7 8
Chow
LFD
HFD
WD


Project: NAFLD
colon
Date: 5.04.'18
Epi-Loss
Lamp
IEC
FXR
M
1: FXR
1: 1000 P
1: 5000 S
1 2 3 4 5 6 7 8
Chow
LFD
HFD
WD
Exposure
20'
37
Cld.5
19
PI 1:10K
Sc: 1:5000
Actin
32
14


Project
NAFLD
Sample: Colon
Date: 5.04.18
Exp. 5sec.
Chow
LFD
HFD
WD
M
Loop
IEC
50
37
(Actin
1:10,000
Se. 1:5000)
(Primary
1:1000
1:5000
+Rb HRP)
CD5
Chow
LFD
HFD
WD
M
Loop
IEC
Exposure 5sec.
Actin
1:10000
1:5000
+MS HRP
50
37
1 2 3 4 5 6 7 8
CD5
1:1000
1:5000
(+Rb HRP)
Date 5.04.18

Project-
NFALD
Sample:
Liver

Exp: 10Sec

M | Chow | LFD | HFD | ND

Loop 1 | Loop 1 | Loop 1 | Loop 1 EC Loop 1 EC

VDL
(P: 1:1000)
(Sec: 1:5000)
αRbHRP

1 2 3 4 5 6 7 8

150
50
Loop 1 EC | Loop 1 EC | Loop 1 EC | Loop 1 EC

VDR
(P: 1:1000
Sec: 1:5000)
αRbHRP

150
50
M Chow | LFD | HFD | ND

Colon

(P: 1:1000
Sec: 1:5000)
αRbHRP

37
19
Loop 1 EC | Loop 1 EC | Loop 1 EC | Loop 1 EC

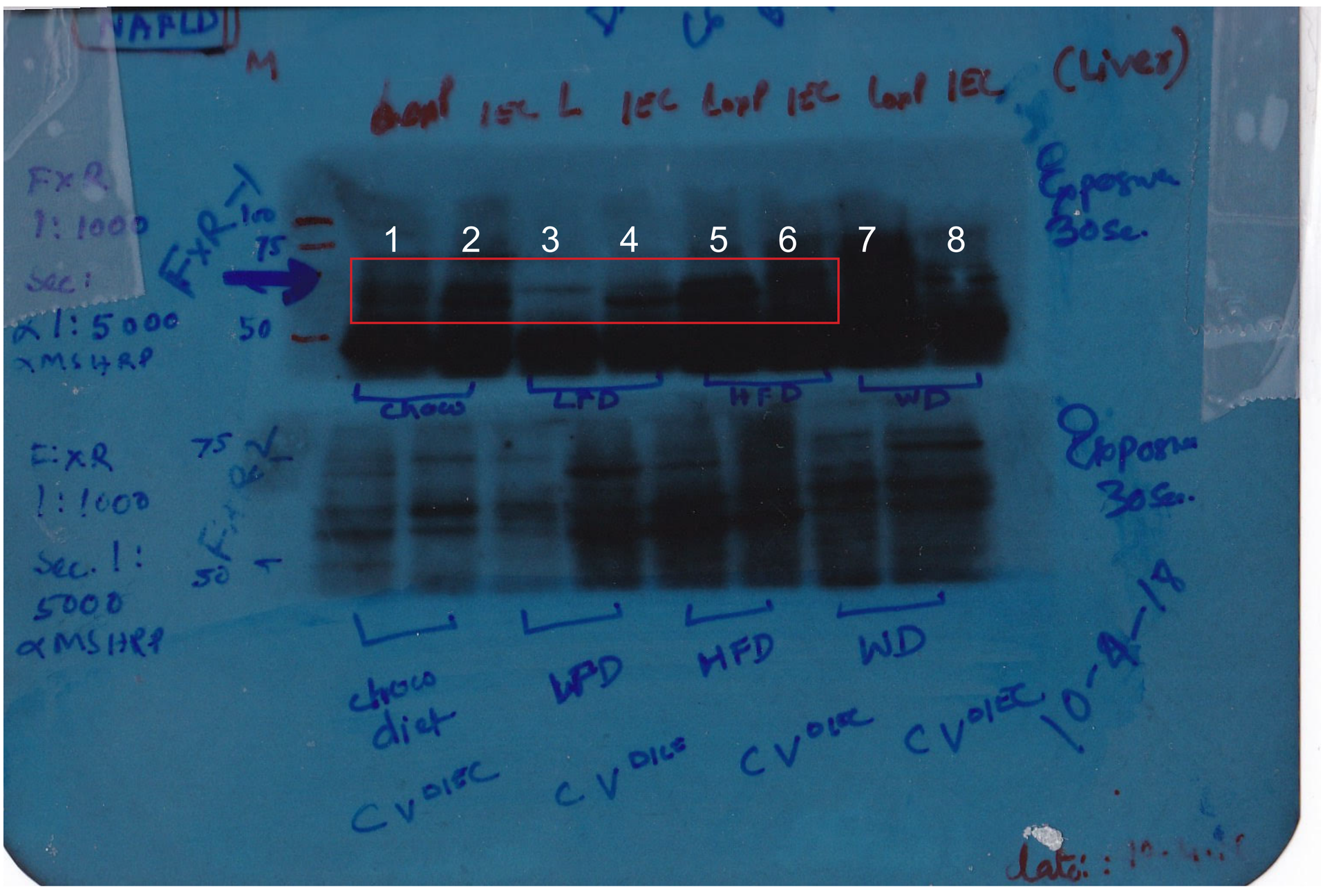
Colon

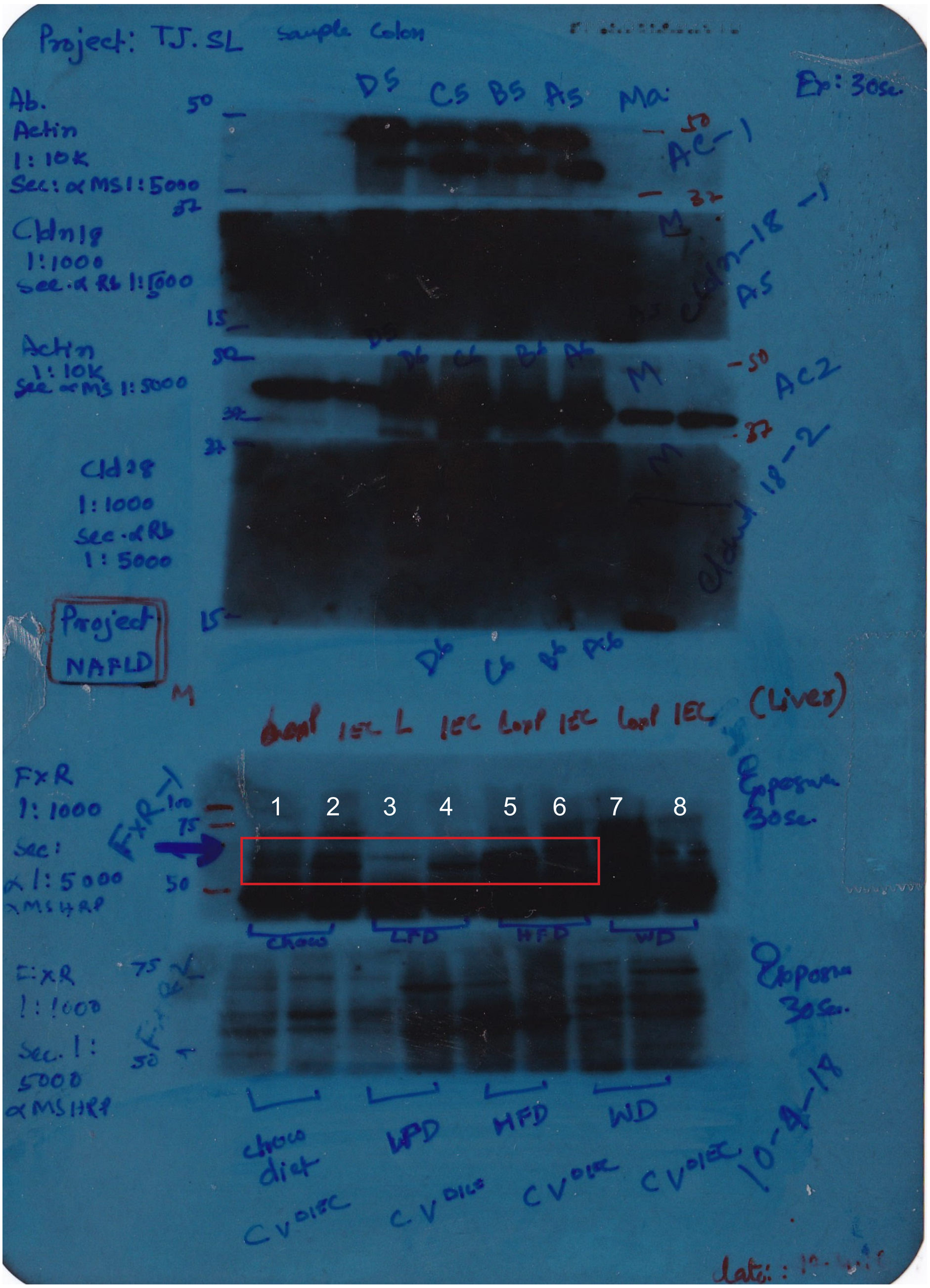
(P: 1:1000
Sec: 1:5000)
αRbHRP

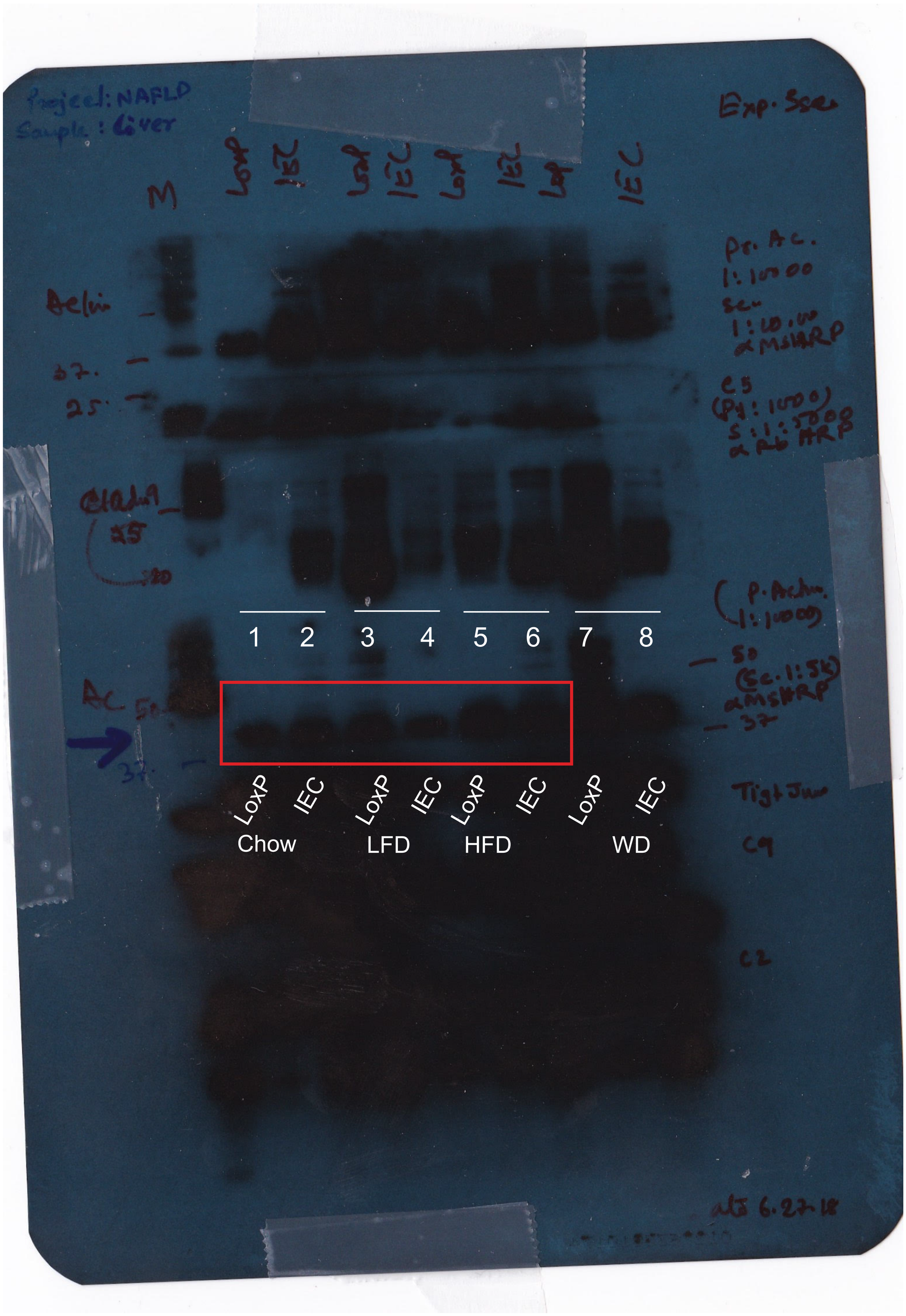
37
19
M Chow | LFD | HFD | ND

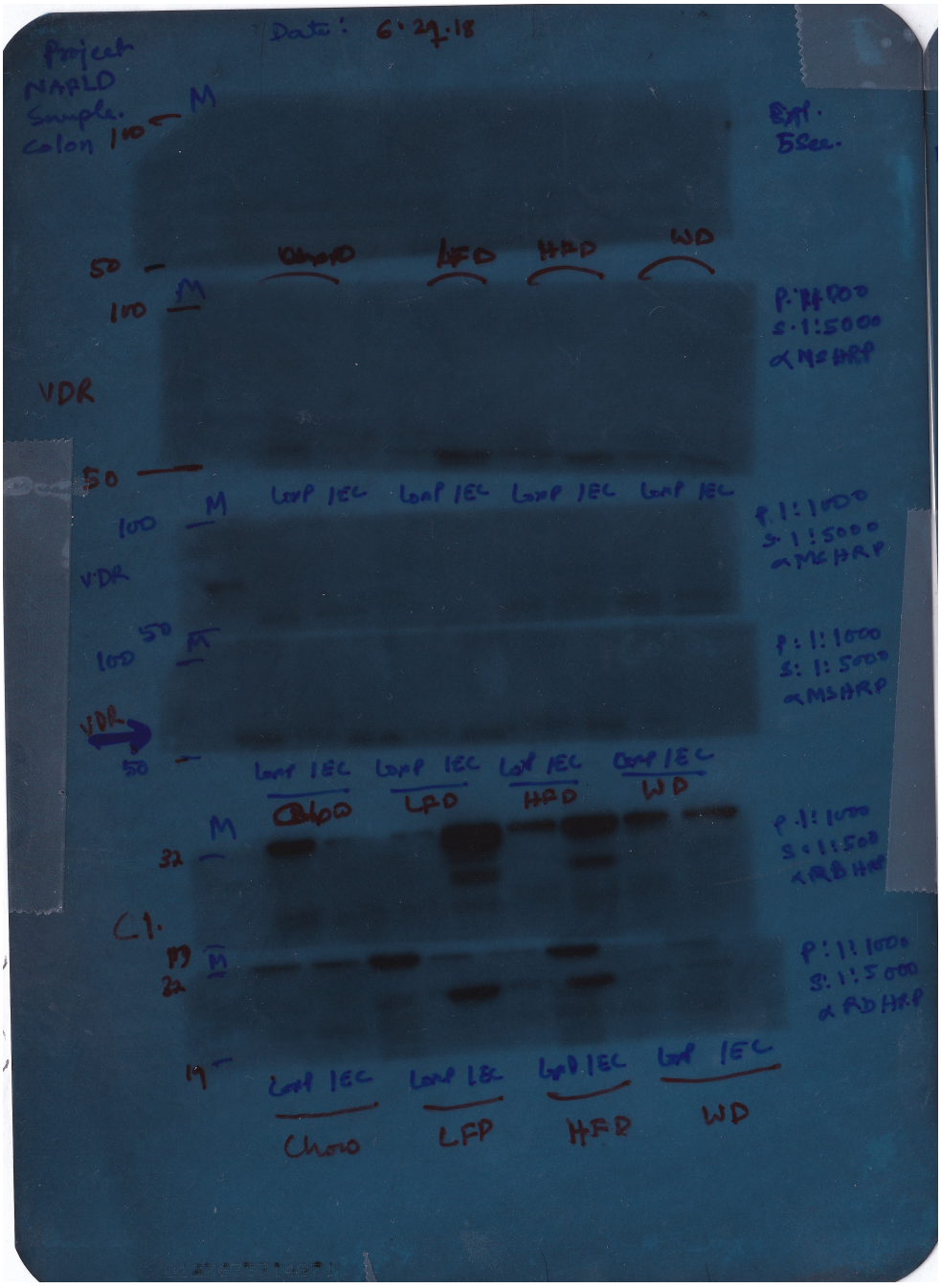
Loop 1 EC Loop 1 EC Loop 1 EC Loop 1 EC

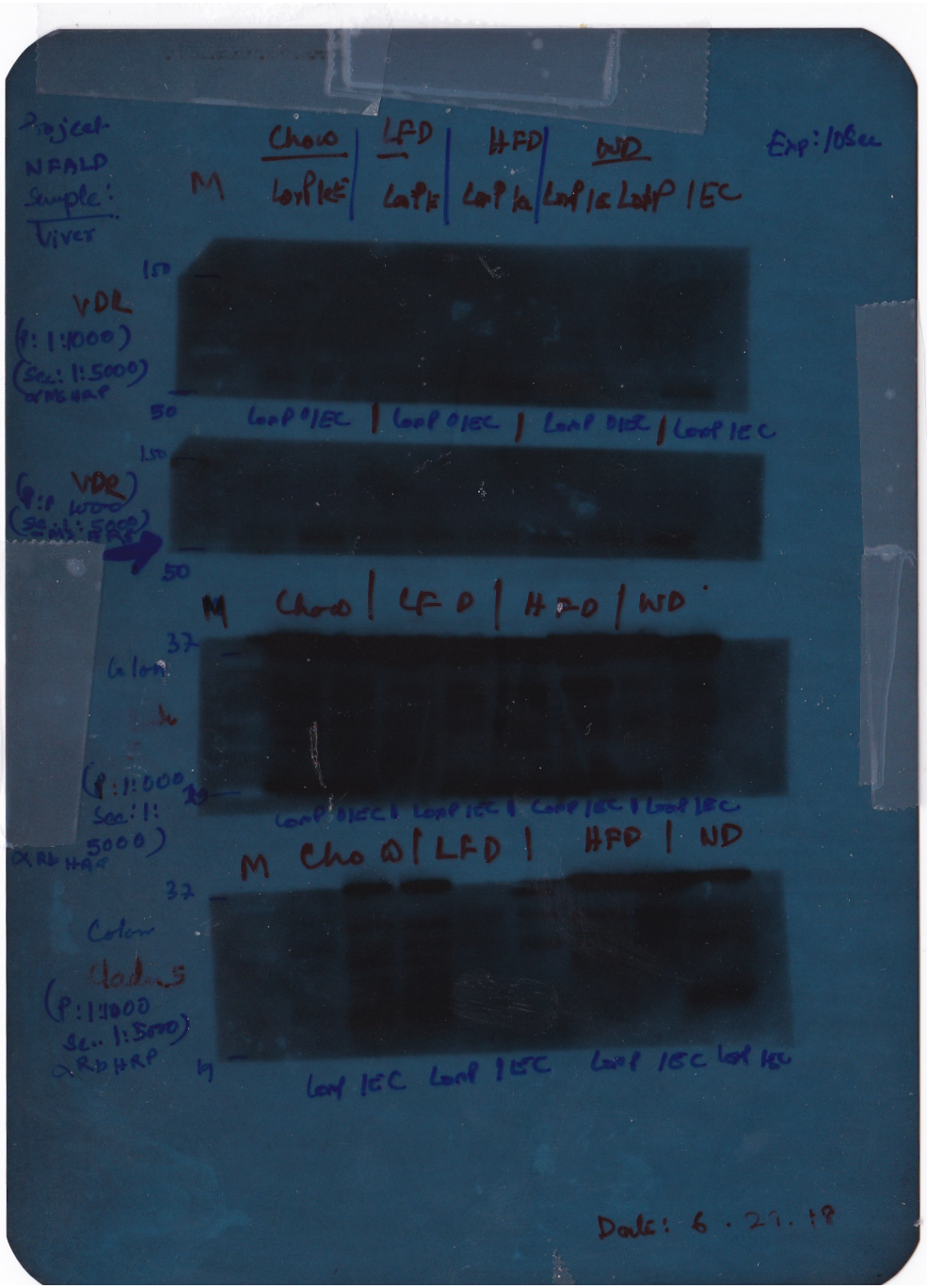
Date: 6.27.18


NAFLD
M
(Liver)
FXR
1:1000
Sec:
αMSHRP
1:5000
1 2 3 4 5 6 7 8
Chow
LFD
HFD
WD
E:XR
1:1000
Sec. 1:
5000
αMSHRP
chow diet
LFD
HFD
WD
CV DIEC
CV DIEC
CV DIEC
CV DIEC
10-A-14


Project: TJ. SL
sample Colon
Ab.
Actin
1:10K
Sec: α MS 1:5000
Cldn18
1:1000
sec. α Rb 1:5000
Actin
1:10K
Sec α MS 1:5000
Cld 18
1:1000
Sec. α Rb
1:5000
Project
NAFLD
FXR
1:1000
Sec:
α 1:5000
α MS HRP
FXR
1:100
1:75
1:50
1 2 3 4 5 6 7 8
Chow
LFD
HFD
WD
Exposure
30sec.
(Liver)
chow diet
WD
HFD
LFD


Project: NAFLD
Sample: Liver
Exp. Scr
M
Lox
IEC
Lox
IEC
Lox
IEC
Lox
IEC
Actin
37.
25.
Claudin 7
Pr. Ac. 1:10000
Sec 1:10,000 αMSHRP
C5 (Pr: 1000) S: 1:5000 αRb HRP
(P. Actin 1:10000)
SD (Sc. 1:5K) αMSHRP
37
Tight Junc
C9
C2
1 2 3 4 5 6 7 8
LoxP
IEC
LoxP
IEC
LoxP
IEC
LoxP
IEC
Chow
LFD
HFD
WD
6.27.18


Project
NAFLD
Sample.
Date: 6.29.18
Colon
M
100
50
Chow
LFD
HFD
WD
VDR
Ext.
5sec.
P: HFDD
S: 1:5000
αMsHRP
Loop IEC
P: 1:1000
S: 1:5000
αMsHRP
P: 1:1000
S: 1:5000
αRbHRP
32
19
Chow
LFD
HFD
WD


Project
NFALD
Sample:
Liver
Exp: 10Sec
Chow | LFD | HFD | WD
M
Loop 1EC | Loop 1EC | Loop 1EC | Loop 1EC Loop 1EC
VDR
(P: 1:1000)
(Sec: 1:5000)
Loop 0 1EC | Loop 0 1EC | Loop 0 1EC | Loop 1EC
VDR)
M Chow | LFD | H2O | WD
Loop 0 1EC | Loop 1EC | Loop 1EC | Loop 1EC
M Chow | LFD | HFD | ND
Loop 1EC Loop 1EC Loop 1EC Loop 1EC
Date: 6.21.18

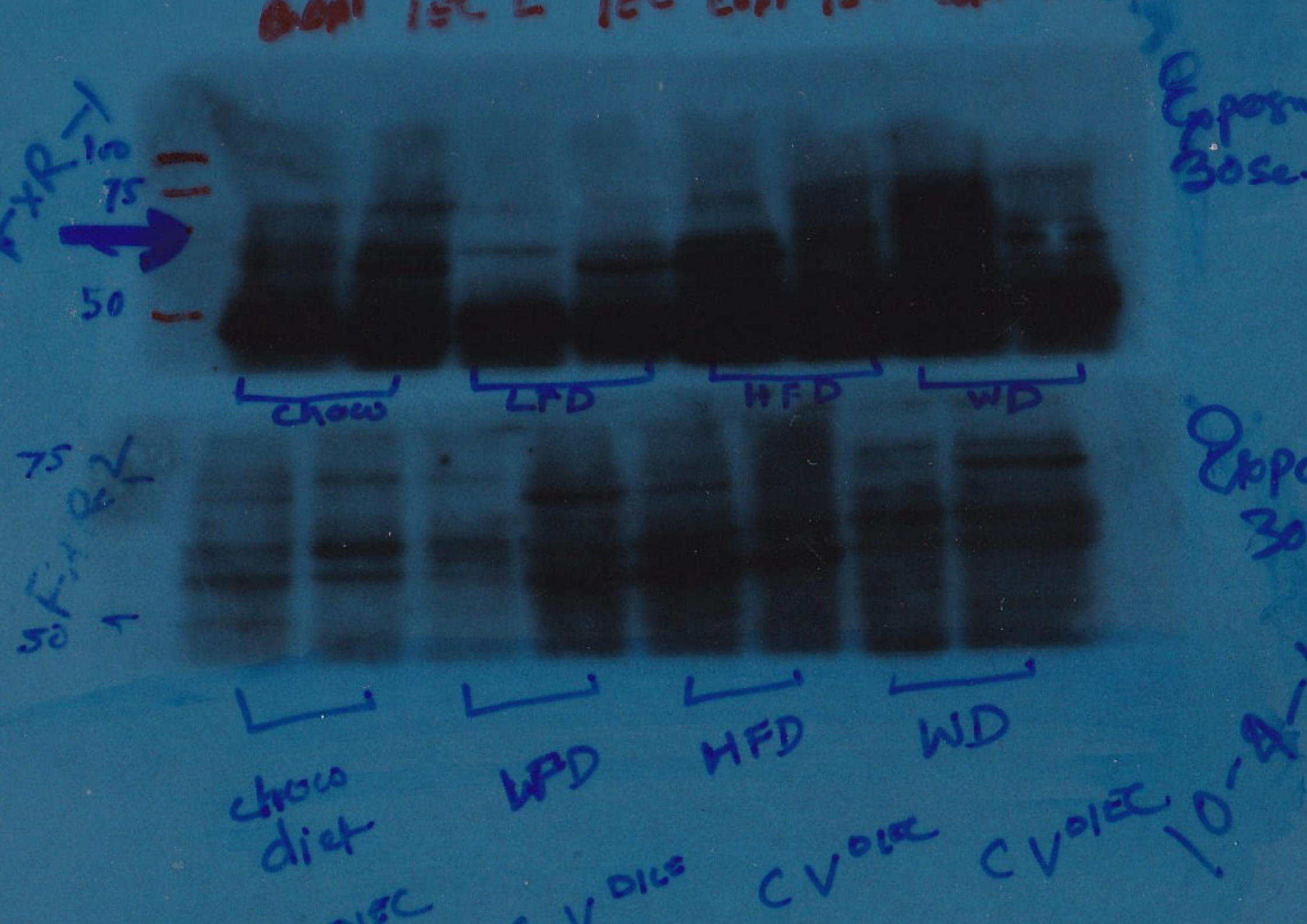
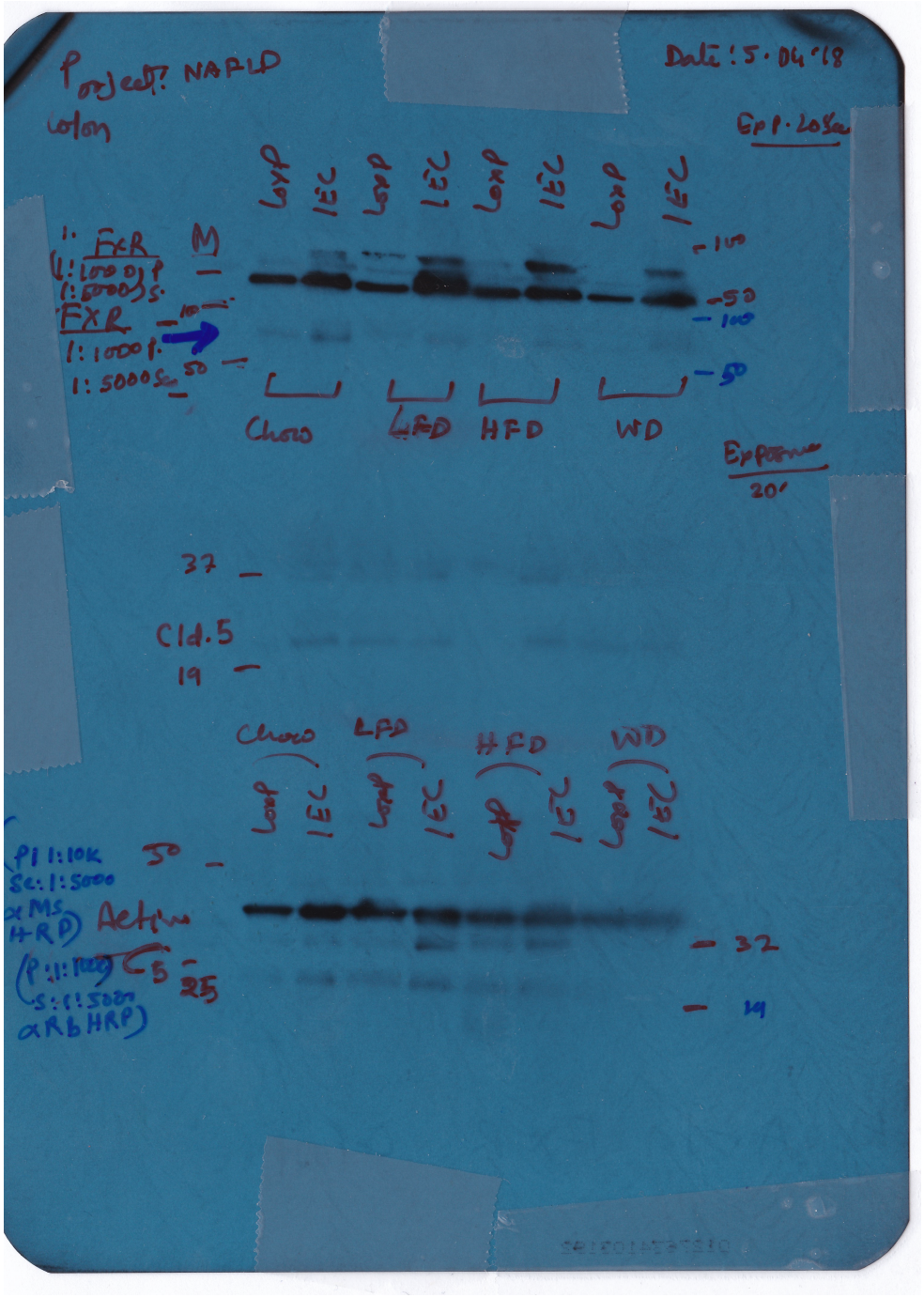
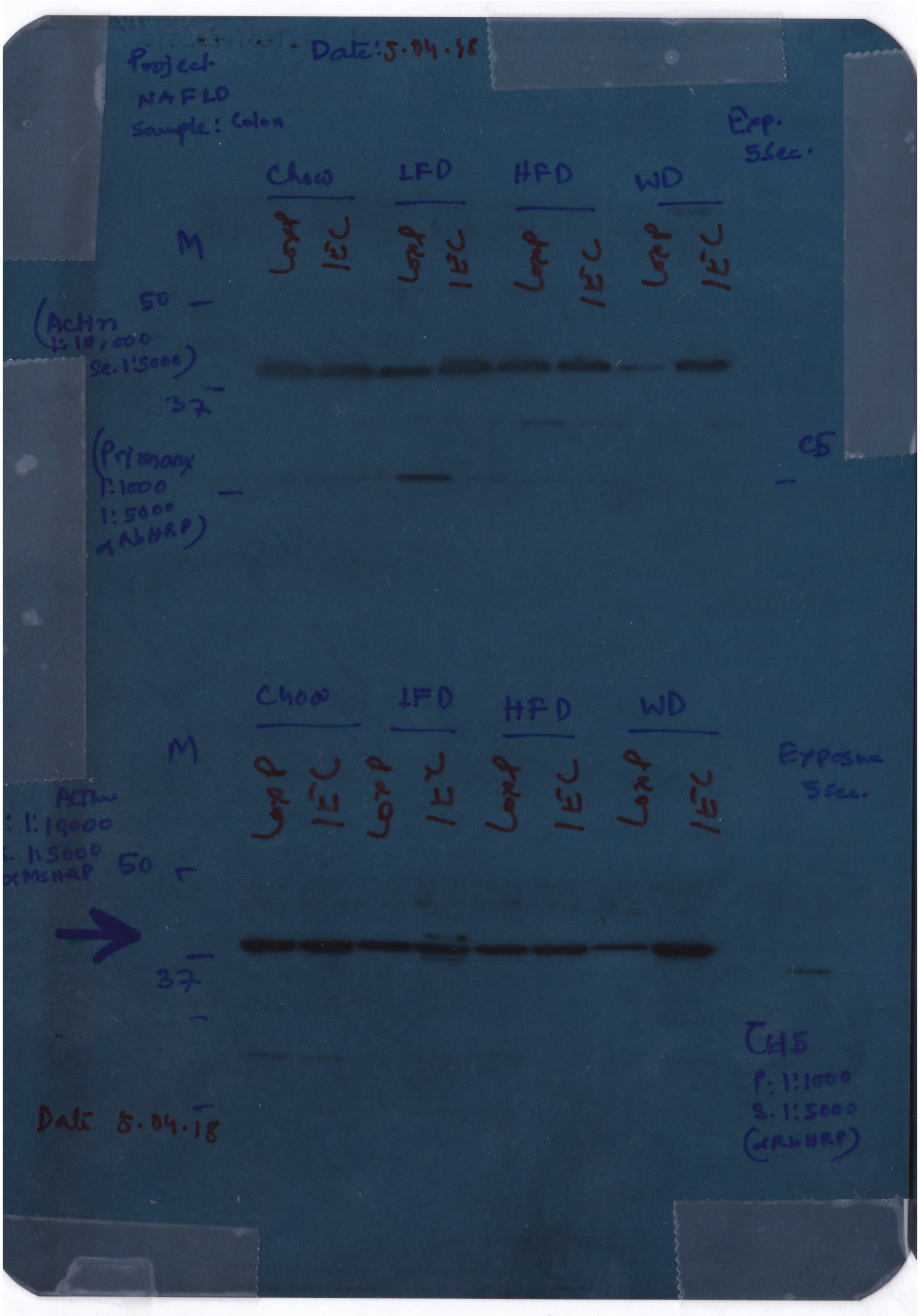

100
75
50
Chow
LFD
HFD
WD
75
50
Chow
LFD
HFD
WD
chow diet
WD
HFD
WD

Fig 5


Project: NAFLD
Colon
Date: 5.04.'18
Epi. Loss
Loop
IEC
M
FXR
Chow
LFD
HFD
WD
Exposure
20'
37
Cld.5
19
Actin
50
25
32
14


Project
NAFLD
Sample: Colon
Date: 5.04.18
Exp. 5sec.
Chow
LFD
HFD
WD
M
Lamp
IEC
50
37
(Actin
1:10,000
Se. 1:5000)
(Primary
1:1000
1:5000
rAb HRP)
CD5
Exposure 5sec.
CD5
1:1000
1:5000
(rAb HRP)
Date 5.04.18