

## Supplemental figures

**FigS1:Original Western images used for preparing Figure.1E**

**Sample name:**

Protein samples of Caco2 cells infected with 0.01moi SARS-CoV-2 at 12hpi, 24hpi and 36hpi

**Target protein:**

FHL2

**MW:**

32 KD

Lane: 4,5,6,7

Right to Left



**Sample name:**

Protein samples of Caco2 cells infected with 0.01moi SARS-CoV-2 at 12hpi, 24hpi and 36hpi

**Target protein:**

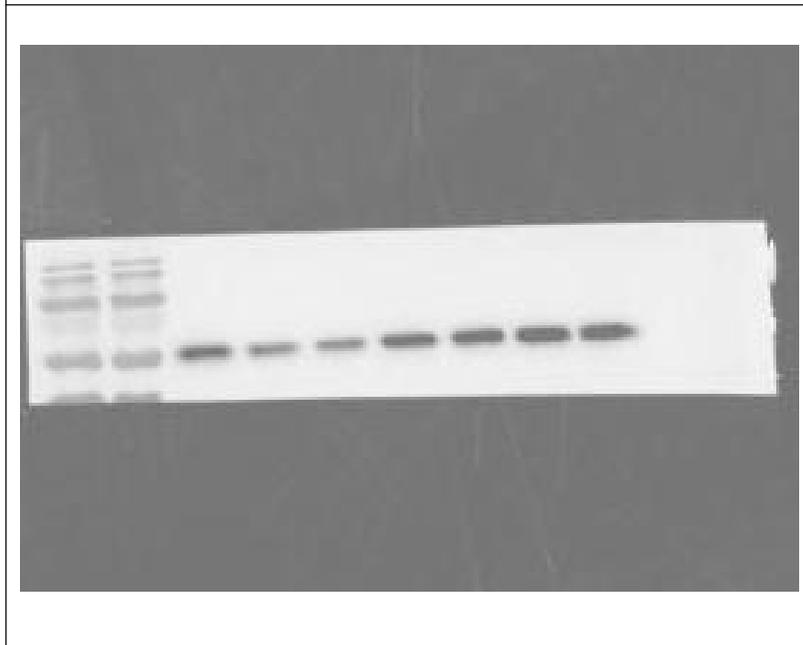
$\alpha$ -tubulin

**MW:**

50 KD

Lane: 4,5,6,7

Right to Left



**FigS2:Original Western images used for preparing Figure.1G**

**Sample name:**  
Protein samples of  
overexpressing FHL2 in  
Caco2 cells

**Target protein:**

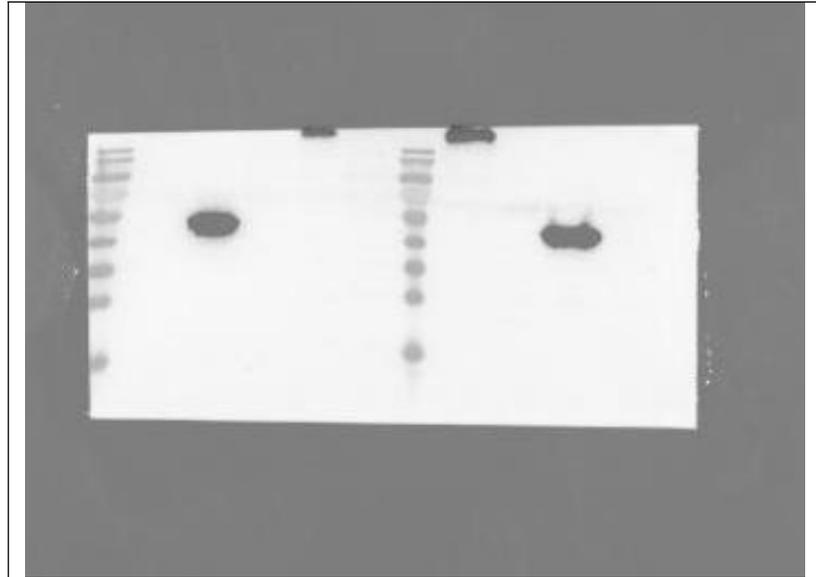
N

**MW:**

55 KD

Lane: 2,3

Left to Right



**Sample name:**  
Protein samples of  
overexpressing FHL2 in  
Caco2 cells

**Target protein:**

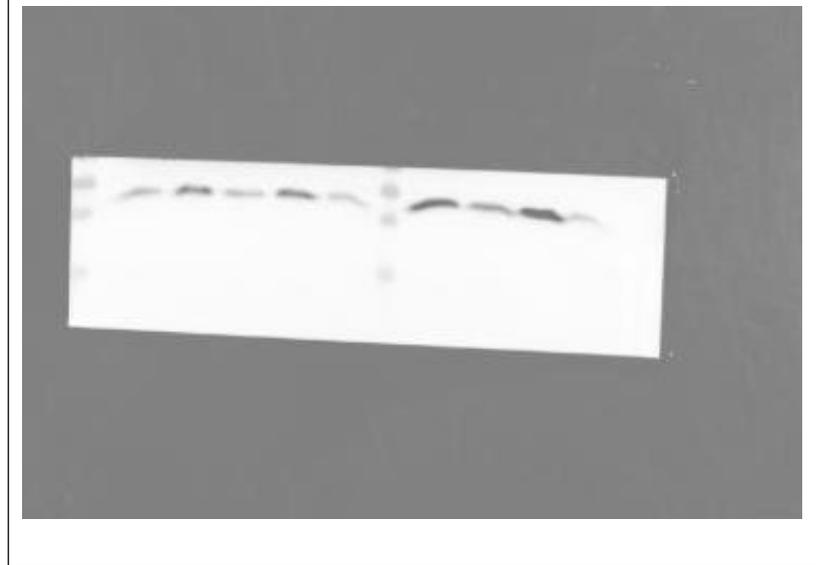
FHL2

**MW:**

32 KD

Lane: 2,3

Left to Right



**Sample name:**  
Protein samples of  
overexpressing FHL2 in  
Caco2 cells

**Target protein:**

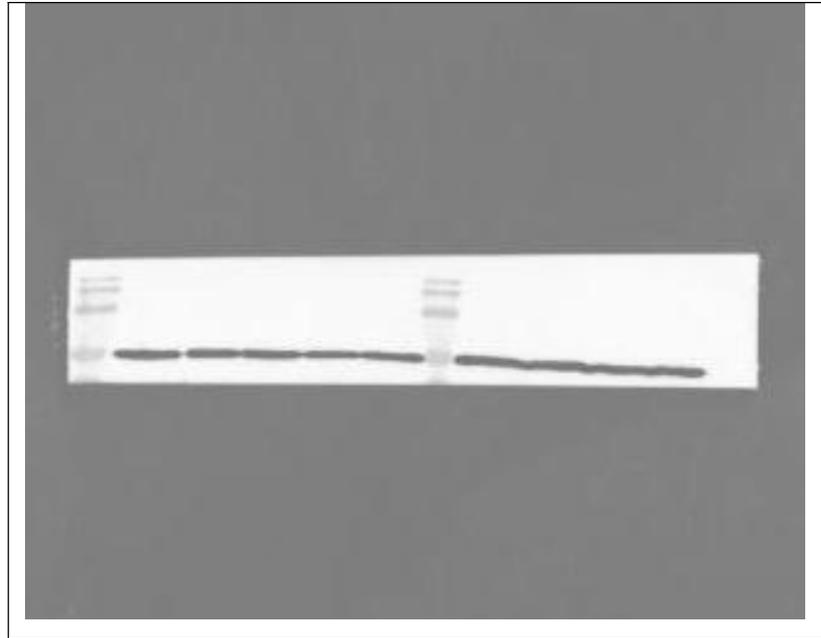
$\alpha$ -tubulin

**MW:**

50 KD

Lane: 2,3

Left to Right



**FigS3:Original Western images used for preparing Figure.2A**

**Sample name:**  
Protein samples of  
transfected with shRNA in  
Caco2 cells

**Target protein:**  
FHL2  
**MW:**  
32 KD



**Sample name:**  
Protein samples of  
transfected with shRNA in  
Caco2 cells

**Target protein:**  
 $\alpha$ -tubulin  
**MW:**  
50 KD

Lane:1,2  
Left to Right



**FigS4:Original Western images used for preparing Figure.2B**

**Sample name:**  
Protein samples of  
transfected with shRNA in  
293T-ACE2 cells

**Target protein:**

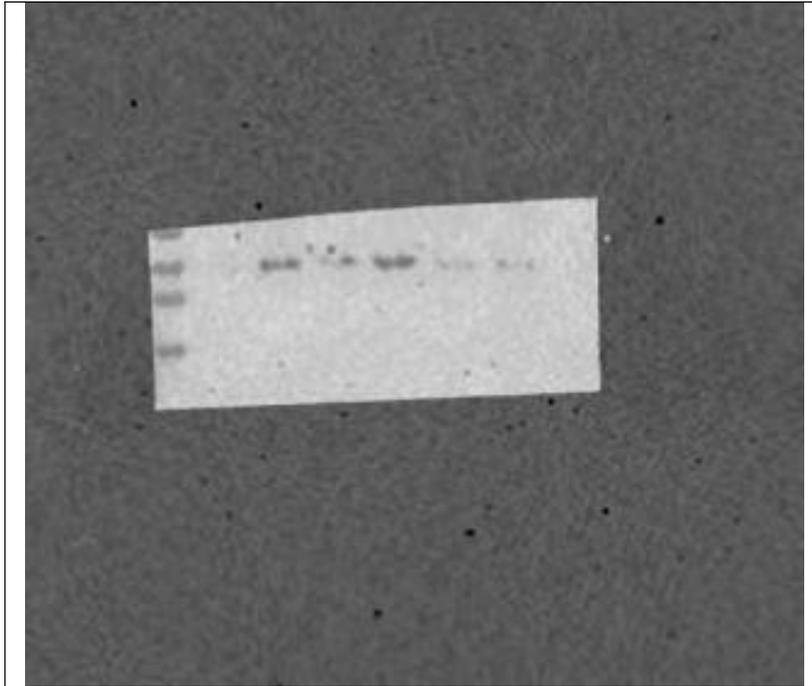
FHL2

**MW:**

32 KD

Lane:1,2

Left to Right



**Sample name:**  
Protein samples of  
transfected with shRNA in  
293T-ACE2 cells

**Target protein:**

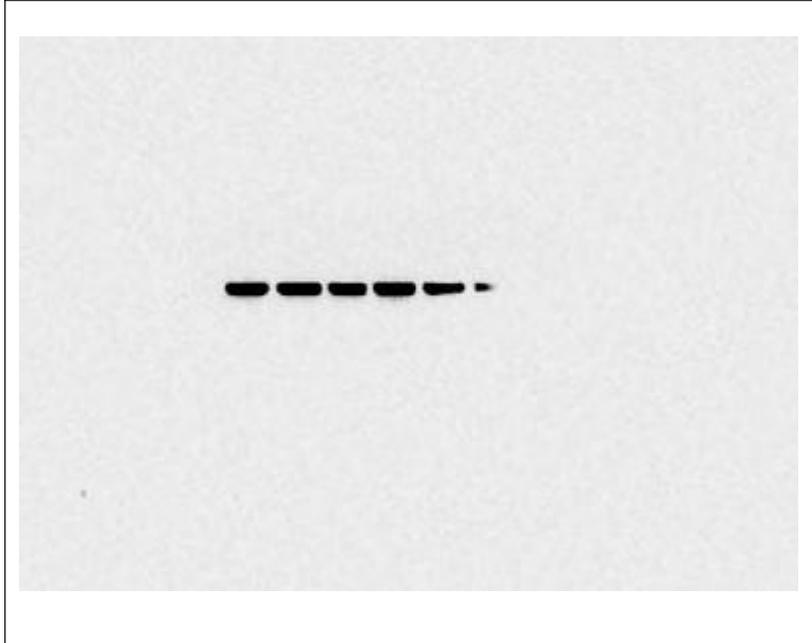
$\alpha$ -tubulin

**MW:**

50 KD

Lane:1,2

Left to Right



**FigS5:Original Western images used for preparing Figure.2C**

**Sample name:**

Protein samples of 0.01  
MOI WT strain were  
infected in FHL2  
knockdown Caco2 cells  
for 12 hours

**Target protein:**

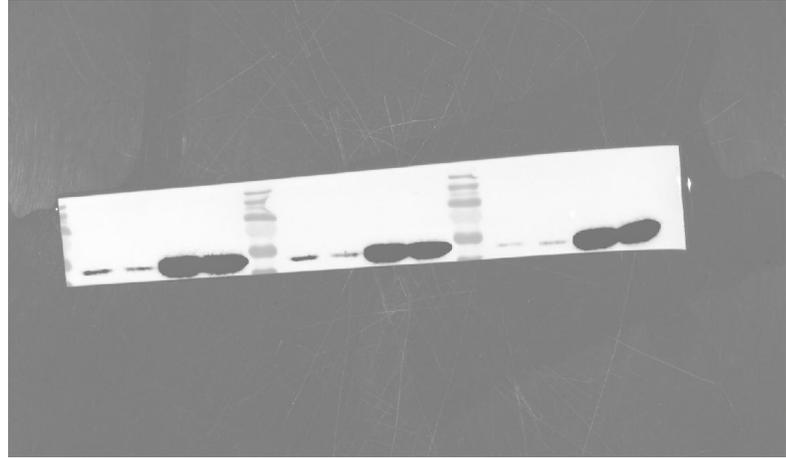
N

**MW:**

55 KD

Lane: 5,6

Left to Right



**Sample name:**

Protein samples of 0.01  
MOI WT strain were  
infected in FHL2  
knockdown Caco2 cells  
for 24 hours

**Target protein:**

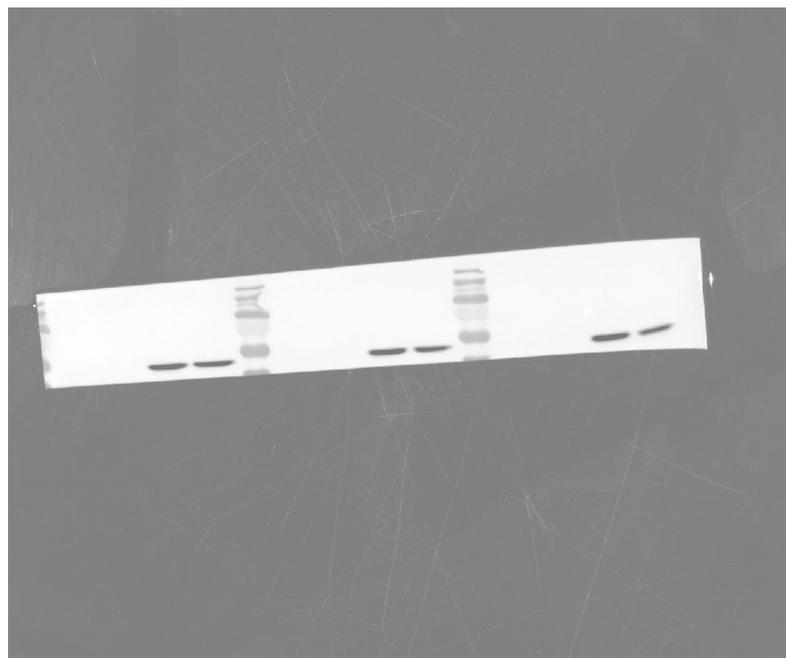
N

**MW:**

55 KD

Lane: 7,8

Left to Right



**Sample name:**

Protein samples of 0.01  
MOI WT strain were  
infected in FHL2  
knockdown Caco2 cells  
for 12 hours

**Target protein:**

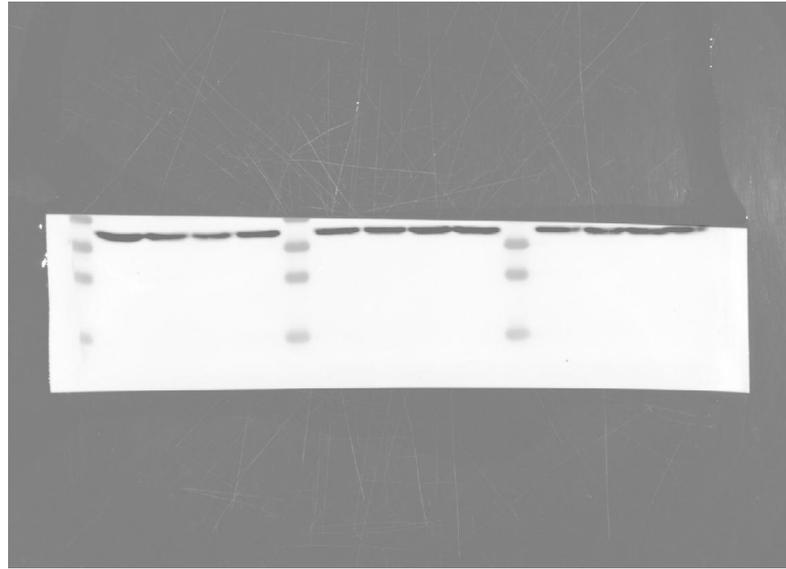
GAPDH

**MW:**

37 KD

Lane: 5,6

Left to Right



**Sample name:**

Protein samples of 0.01  
MOI WT strain were  
infected in FHL2  
knockdown Caco2 cells  
for 24 hours

Caco2 cells

**Target protein:**

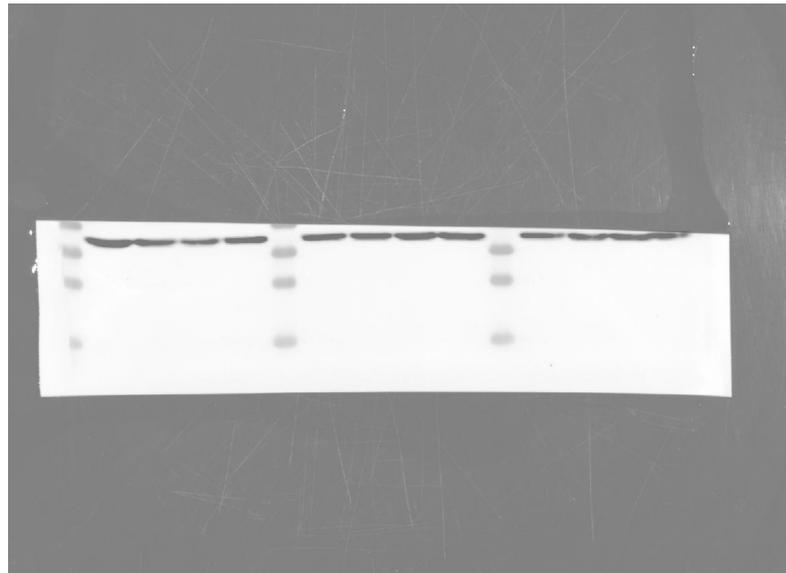
GAPDH

**MW:**

37 KD

Lane: 7,,8

Left to Right



**Sample name:**

Protein samples of 0.1  
MOI WT strain were  
infected in FHL2  
knockdown Caco2 cells  
for 12 hours

**Target protein:**

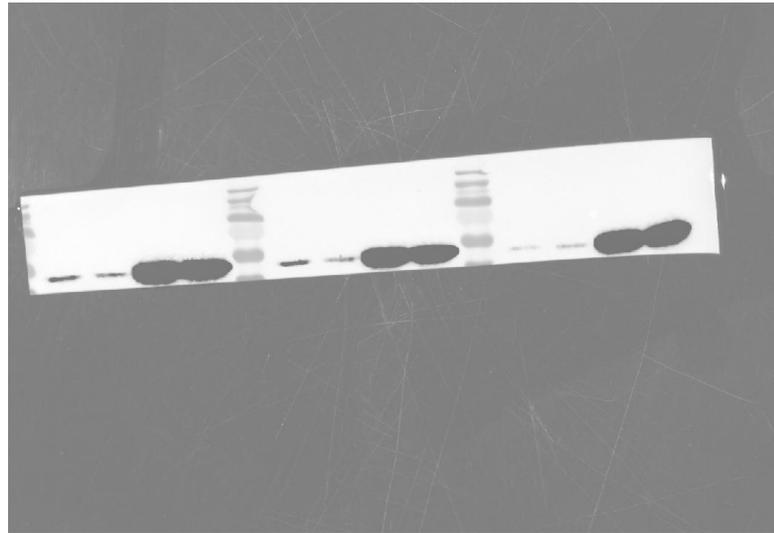
N

**MW:**

55 KD

Lane: 1,2

Left to Right



**Sample name:**

Protein samples of 0.1  
MOI WT strain were  
infected in FHL2  
knockdown Caco2 cells  
for 24 hours

Caco2 cells

**Target protein:**

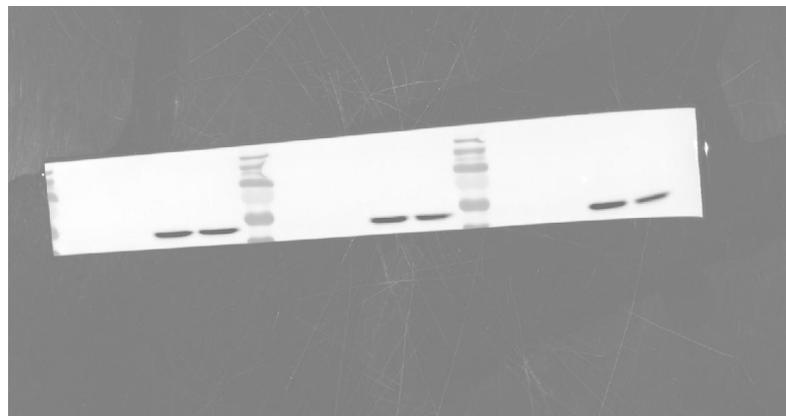
N

**MW:**

55 KD

Lane: 3,4

Left to Right



**Sample name:**

Protein samples of 0.1  
MOI WT strain were  
infected in FHL2  
knockdown Caco2 cells  
for 12 hours

**Target protein:**

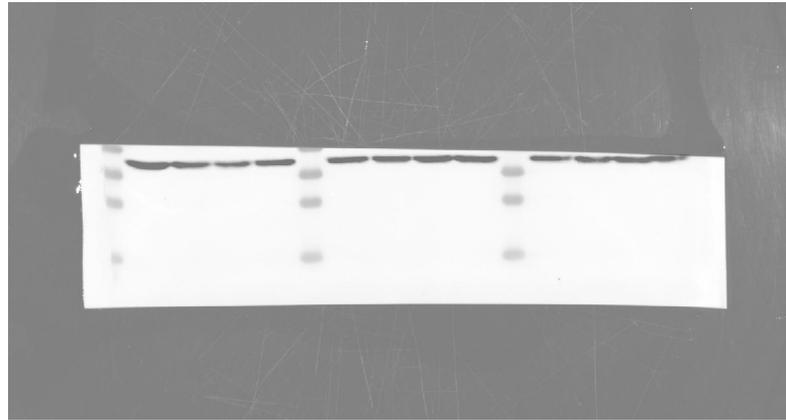
GAPDH

**MW:**

37 KD

Lane: 1,2

Left to Right



**Sample name:**

Protein samples of 0.1  
MOI WT strain were  
infected in FHL2  
knockdown Caco2 cells  
for 24 hours

Caco2 cells

**Target protein:**

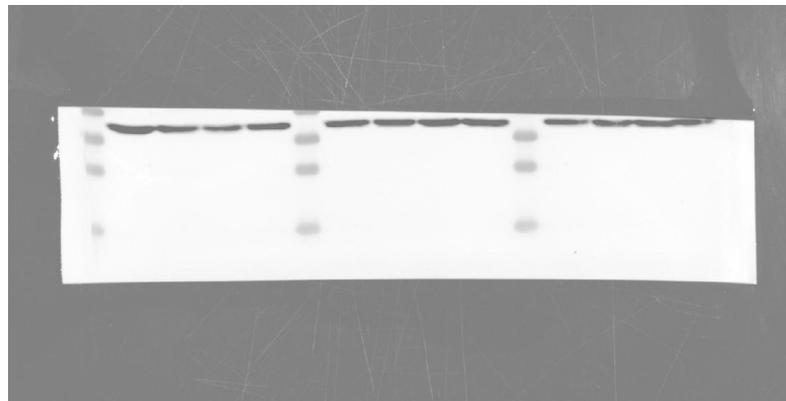
GAPDH

**MW:**

37 KD

Lane: 3,4

Left to Right



**Sample name:**

Protein samples of 0.01  
MOI BA.1 strain were  
infected in FHL2  
knockdown Caco2 cells  
for 12 hours

**Target protein:**

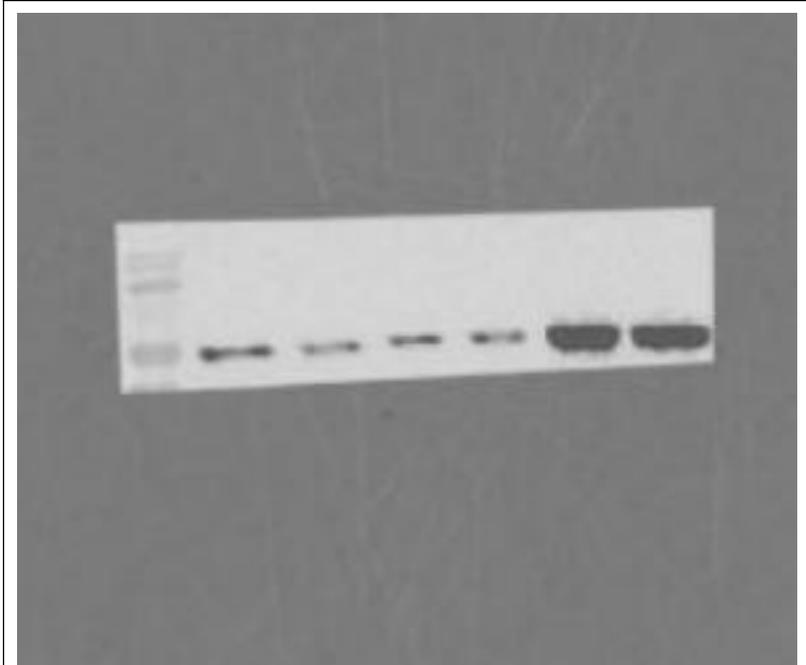
N

**MW:**

55 KD

Lane: 3,4

Left to Right



**Sample name:**

Protein samples of 0.01  
MOI BA.1 strain were  
infected in FHL2  
knockdown Caco2 cells  
for 24 hours

**Target protein:**

N

**MW:**

55 KD



**Sample name:**

Protein samples of 0.01  
MOI BA.1 strain were  
infected in FHL2  
knockdown Caco2 cells  
for 12 hours

**Target protein:**

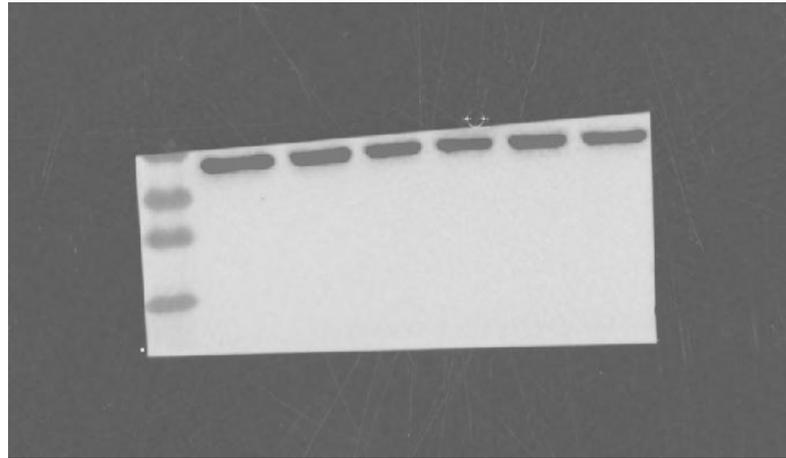
GAPDH

**MW:**

37 KD

Lane: 3,4

Left to Right



**Sample name:**

Protein samples of 0.01  
MOI BA.1 strain were  
infected in FHL2  
knockdown Caco2 cells  
for 24 hours

**Target protein:**

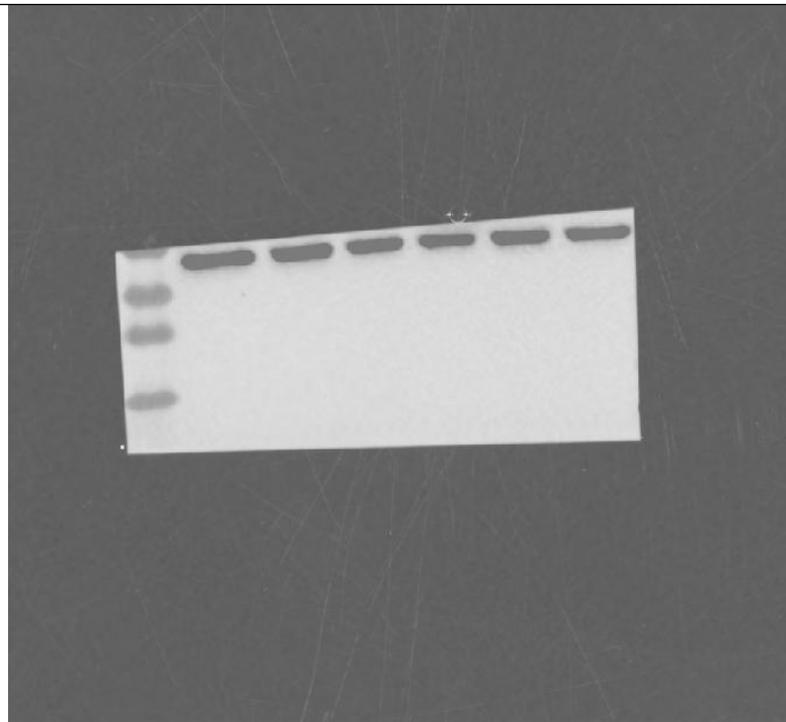
GAPDH

**MW:**

37 KD

Lane: 5,6

Left to Right



**FigS6:Original Western images used for preparing Figure.2D**

**Sample name:**

Protein samples of 0.01  
MOI WT strain were  
infected in FHL2  
knockdown 293T-ACE2  
cells for 12 hours

**Target protein:**

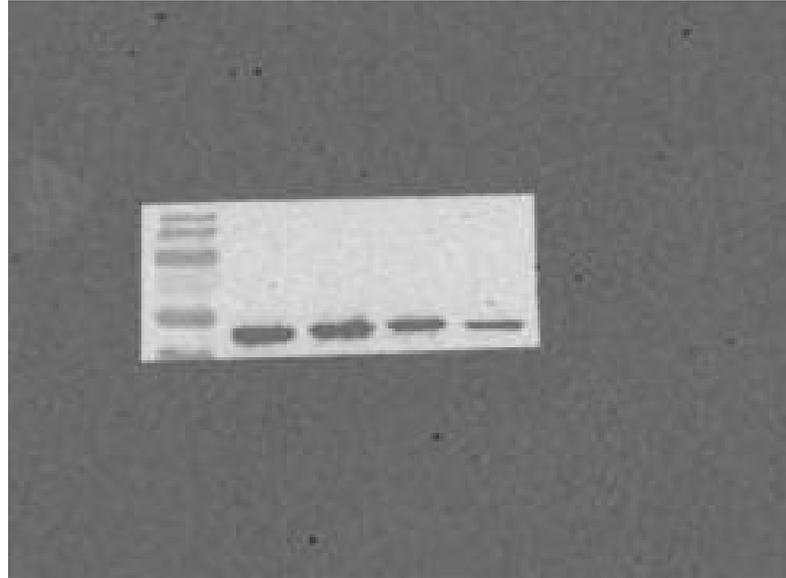
N

**MW:**

55 KD

Lane: 3,4

Left to Right



**Sample name:**

Protein samples of 0.01  
MOI WT strain were  
infected in FHL2  
knockdown 293T-ACE2  
cells for 24 hours

**Target protein:**

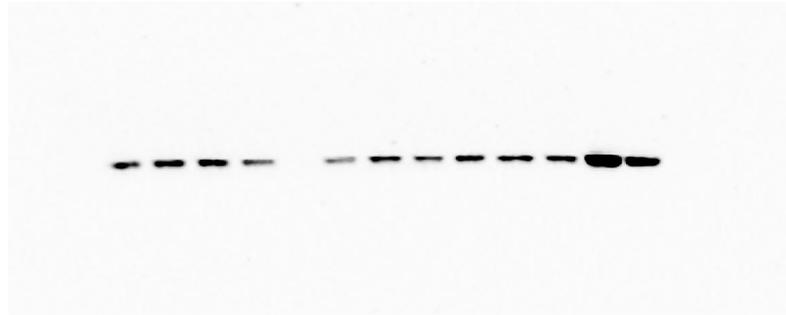
N

**MW:**

55 KD

Lane: 1,2

Right to Left



**Sample name:**

Protein samples of 0.01  
MOI WT strain were  
infected in FHL2  
knockdown 293T-ACE2  
cells for 12 hours

**Target protein:**

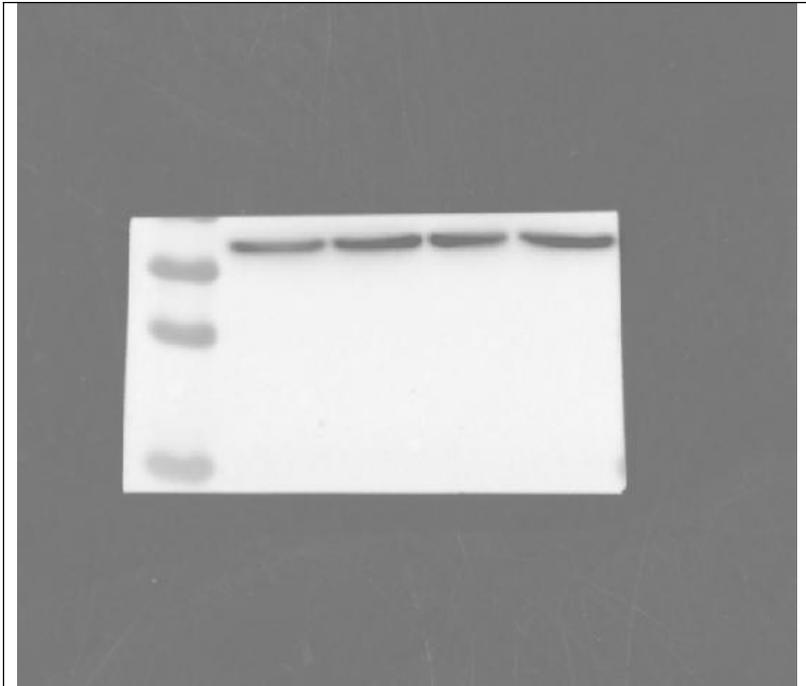
GAPDH

**MW:**

37 KD

Lane: 3,4

Left to Right



**Sample name:**

Protein samples of 0.01  
MOI WT strain were  
infected in FHL2  
knockdown 293T-ACE2  
cells for 24 hours

**Target protein:**

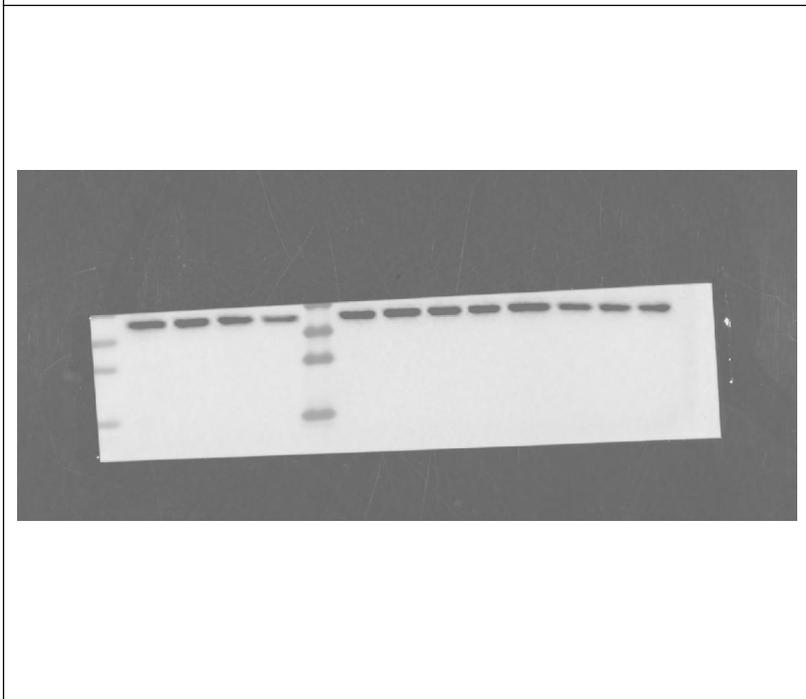
GAPDH

**MW:**

37 KD

Lane: 1,2

Right to Left



**Sample name:**

Protein samples of 0.01  
MOI BA.1 strain were  
infected in FHL2  
knockdown 293T-ACE2  
cells for 12 hours

**Target protein:**

N

**MW:**

55 KD

Lane: 1,2

Left to Right



**Sample name:**

Protein samples of 0.01  
MOI BA.1 strain were  
infected in FHL2  
knockdown 293T-ACE2  
cells for 24 hours

**Target protein:**

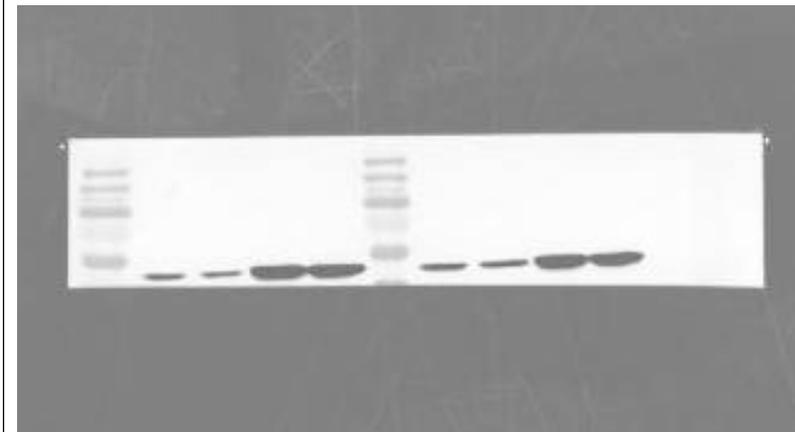
N

**MW:**

55 KD

Lane: 7,8

Left to Right



**Sample name:**

Protein samples of 0.01  
MOI BA.1 strain were  
infected in FHL2  
knockdown 293T-ACE2  
cells for 12 hours

**Target protein:**

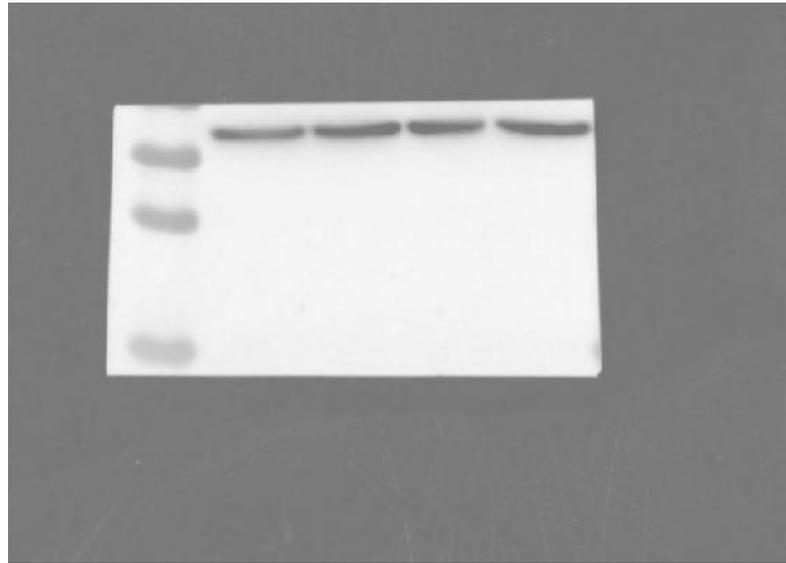
GAPDH

**MW:**

37 KD

Lane: 1,2

Left to Right



**Sample name:**

Protein samples of 0.01  
MOI BA.1 strain were  
infected in FHL2  
knockdown 293T-ACE2  
cells for 24 hours

**Target protein:**

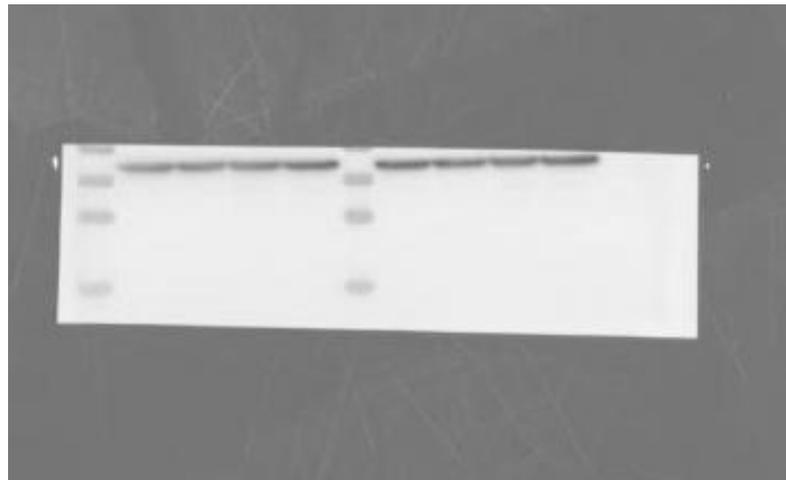
GAPDH

**MW:**

37 KD

Lane: 7,8

Left to Right



**FigS7:Original Western images used for preparing Figure.3A**

**Sample name:**

Protein samples of Caco2  
cells transfected with  
FHL2-his eukaryotic  
expression plasmid

**Target protein:**

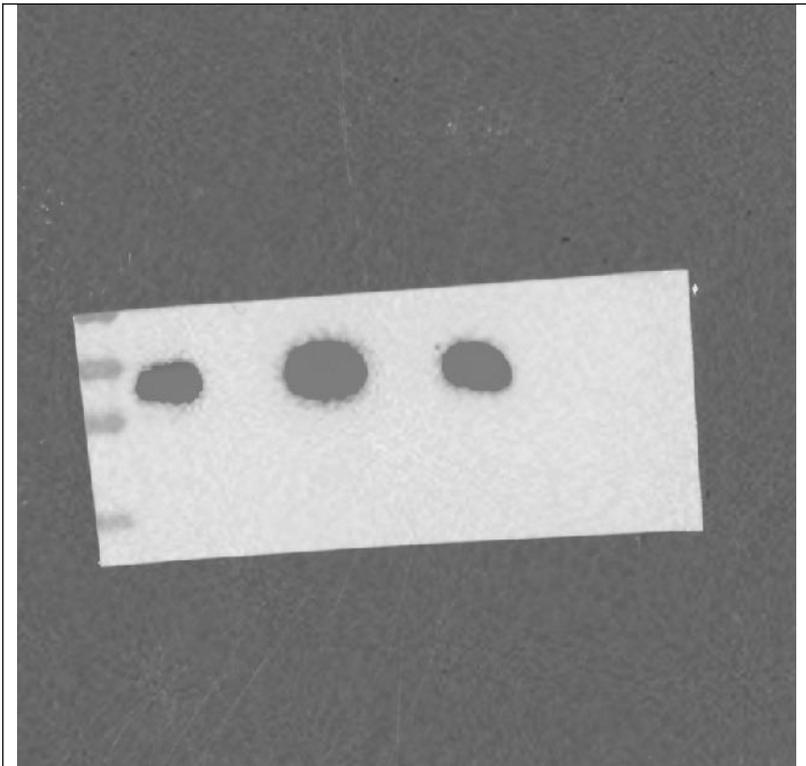
FHL2-his

**MW:**

32 KD

Lane: 5,6

Left to Right



**Sample name:**

Protein samples of Caco2  
cells transfected with  
FHL2-his eukaryotic  
expression plasmid

**Target protein:**

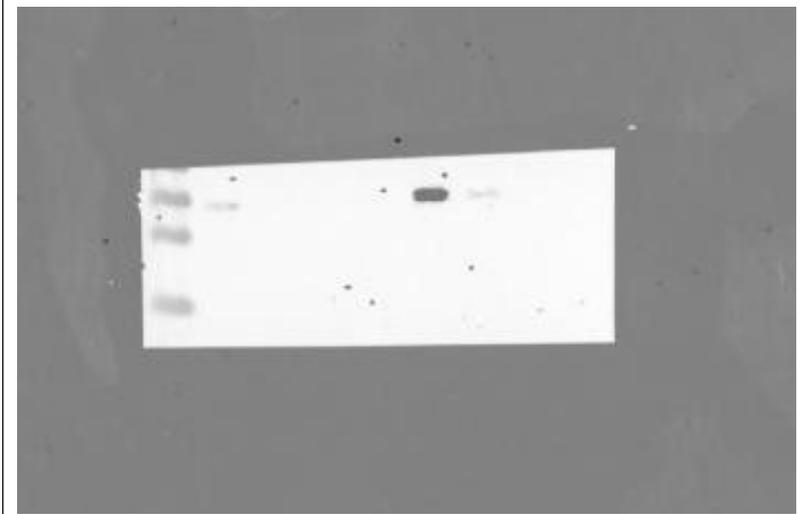
FHL2

**MW:**

32 KD

Lane: 5,6

Left to Right



**Sample name:**

Protein samples of Caco2  
cells transfected with  
FHL2-his eukaryotic  
expression plasmid

**Target protein:**

$\alpha$ -tubulin

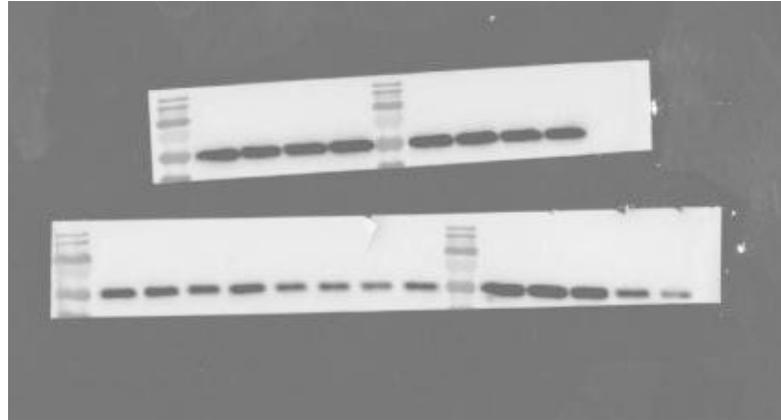
**MW:**

50 KD

Second row

Lane: 5,6

Left to Right



**FigS8:Original Western images used for preparing Figure.3B**

**Sample name:**

Protein samples of  
293T-ACE2 cells transfected  
with FHL2-his eukaryotic  
expression plasmid

**Target protein:**

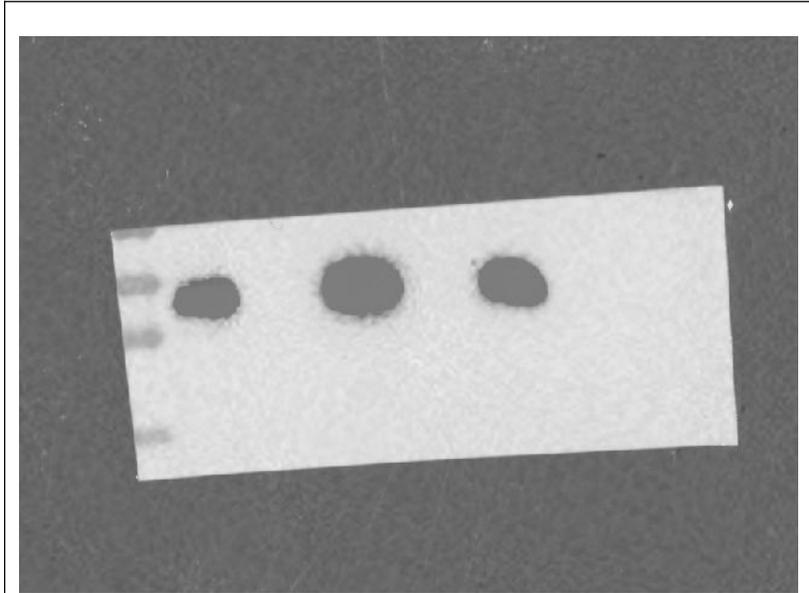
FHL2-his

**MW:**

32 KD

Lane: 1,2

Left to Right



**Sample name:**

Protein samples of  
293T-ACE2 cells transfected  
with FHL2-his eukaryotic  
expression plasmid

**Target protein:**

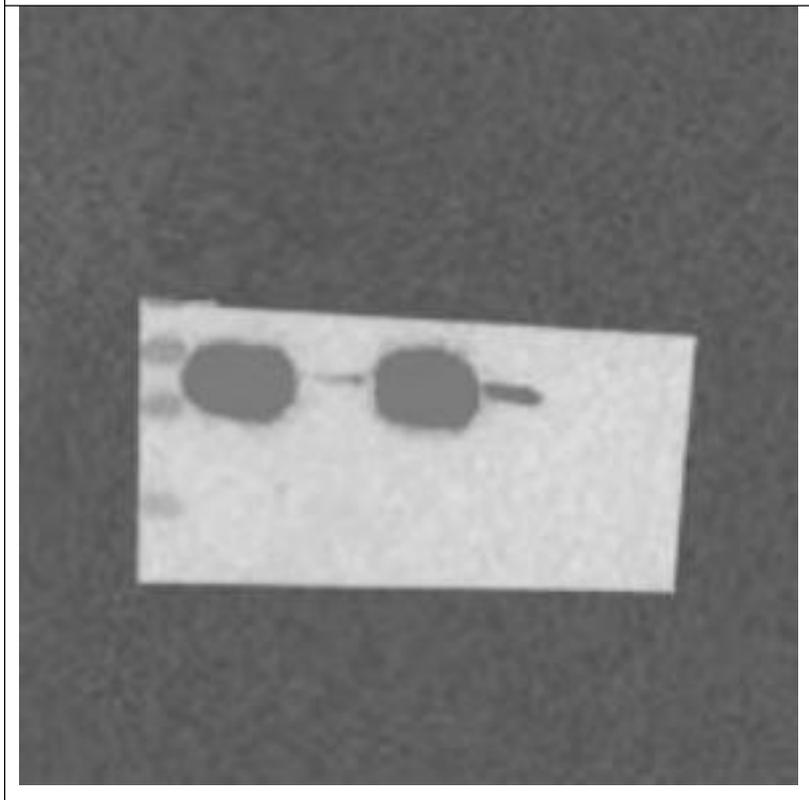
FHL2-his

**MW:**

32 KD

Lane: 3,4

Left to Right



**Sample name:**

Protein samples of  
293T-ACE2 cells transfected  
with FHL2-his eukaryotic  
expression plasmid

**Target protein:**

$\alpha$ -tubulin

**MW:**

50 KD

Lane: 1,2

Left to Right



**FigS9:Original Western images used for preparing Figure.3C**

**Sample name:**

Protein samples of  
0.01MOI WT strain were  
infected in FHL2  
overexpressing Caco2 cells  
for 12 hours

**Target protein:**

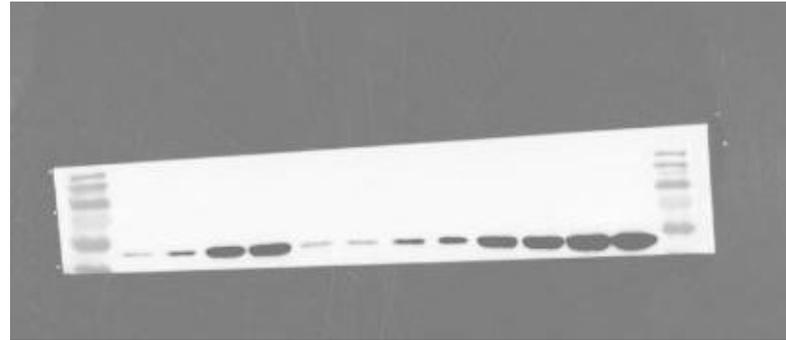
N

**MW:**

55 KD

Lane: 1,2

Left to Right



**Sample name:**

Protein samples of  
0.01MOI WT strain were  
infected in FHL2  
overexpressing Caco2 cells  
for 24 hours

**Target protein:**

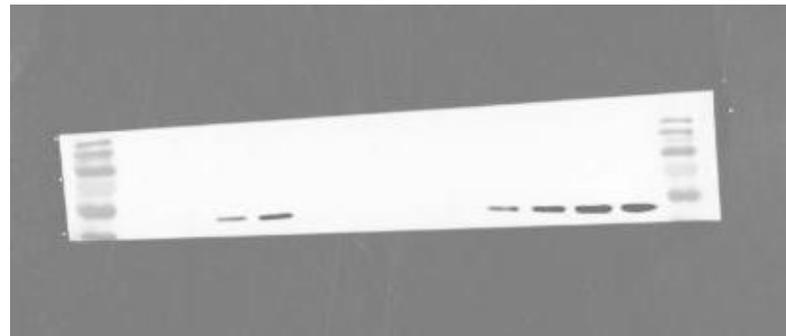
N

**MW:**

55 KD

Lane: 3,4

Left to Right



**Sample name:**

Protein samples of  
0.01MOI WT strain were  
infected in FHL2  
overexpressing Caco2 cells  
for 12 hours

**Target protein:**

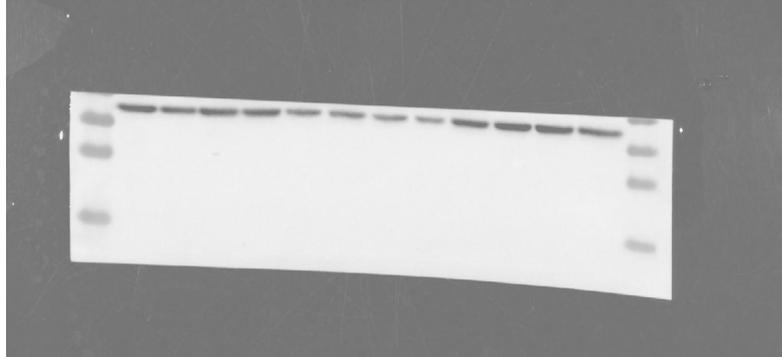
GAPDH

**MW:**

37 KD

Lane: 1,2

Left to Right



**Sample name:**

Protein samples of  
0.01MOI WT strain were  
infected in FHL2  
overexpressing Caco2 cells  
for 24 hours

**Target protein:**

GAPDH

**MW:**

37 KD

Lane: 3,4

Left to Right



**Sample name:**

Protein samples of 0.1MOI  
WT strain were infected in  
FHL2 overexpressing  
Caco2 cells for 12 hours

**Target protein:**

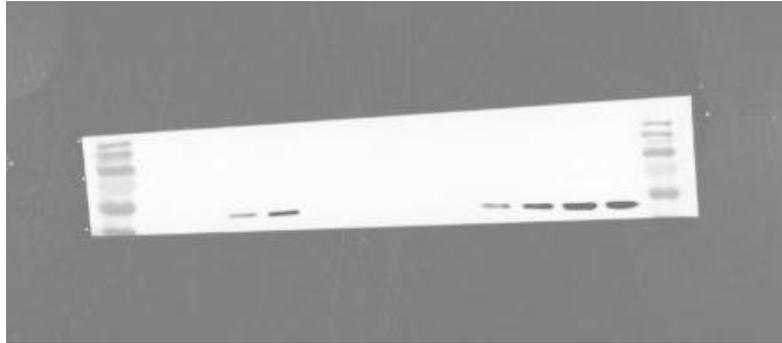
N

**MW:**

55 KD

Lane: 3,4

Right to Left



**Sample name:**

Protein samples of 0.1MOI  
WT strain were infected in  
FHL2 overexpressing  
Caco2 cells for 24 hours

**Target protein:**

N

**MW:**

55 KD

Lane: 1,2

Right to Left



**Sample name:**

Protein samples of 0.1MOI  
WT strain were infected in  
FHL2 overexpressing  
Caco2 cells for 12 hours

**Target protein:**

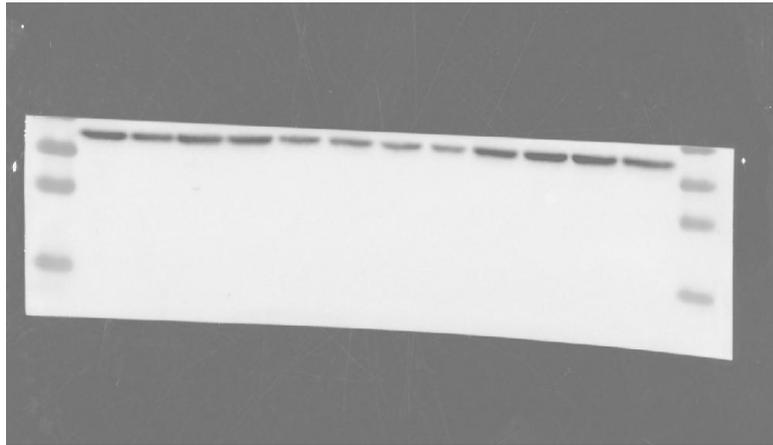
GAPDH

**MW:**

37 KD

Lane: 3,4

Right to Left



**Sample name:**

Protein samples of 0.1MOI  
WT strain were infected in  
FHL2 overexpressing  
Caco2 cells for 24 hours

**Target protein:**

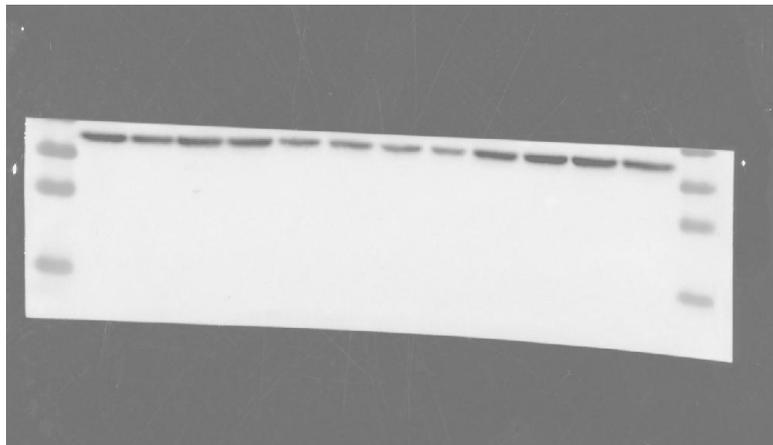
GAPDH

**MW:**

37 KD

Lane: 1,2

Right to Left



**Sample name:**

Protein samples of  
0.01MOI BA.1 strain were  
infected in FHL2  
overexpressing Caco2 cells  
for 12 hours

**Target protein:**

N

**MW:**

55 KD

Lane: 7,8

Right to Left



**Sample name:**

Protein samples of  
0.01MOI BA.1 strain were  
infected in FHL2  
overexpressing Caco2 cells  
for 24 hours

**Target protein:**

N

**MW:**

55 KD

Lane: 5,6

Right to Left



**Sample name:**

Protein samples of  
0.01MOI BA.1 strain were  
infected in FHL2  
overexpressing Caco2 cells  
for 12 hours

**Target protein:**

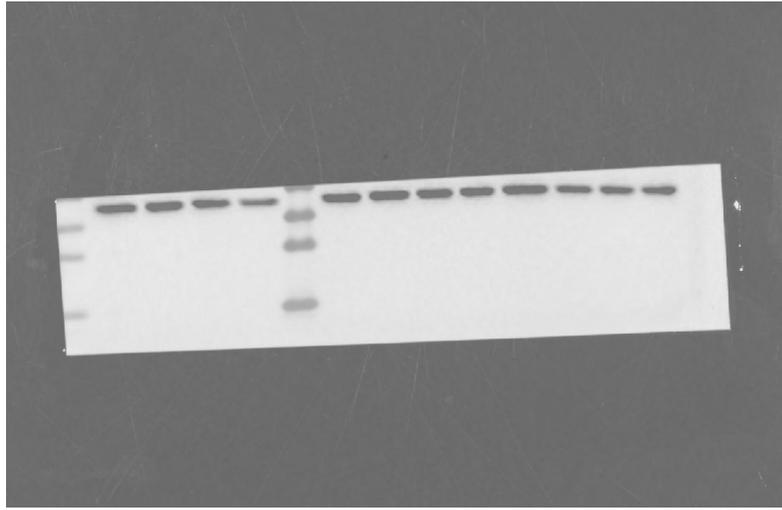
GAPDH

**MW:**

37 KD

Lane: 7,8

Right to Left



**Sample name:**

Protein samples of  
0.01MOI BA.1 strain were  
infected in FHL2  
overexpressing Caco2 cells  
for 24 hours

**Target protein:**

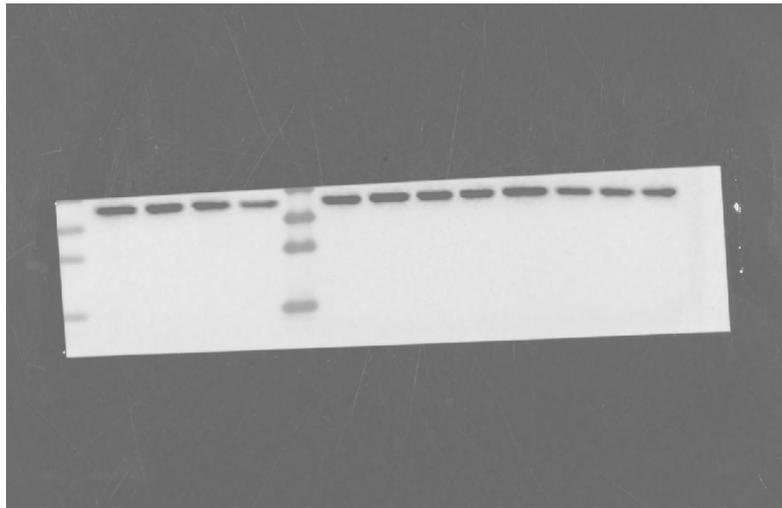
GAPDH

**MW:**

37 KD

Lane: 5,6

Right to Left



**FigS10:Original Western images used for preparing Figure.3D**

**Sample name:**

Protein samples of  
0.01MOI WT strain were  
infected in FHL2  
overexpressing  
293T-ACE2 cells for 12  
hours

**Target protein:**

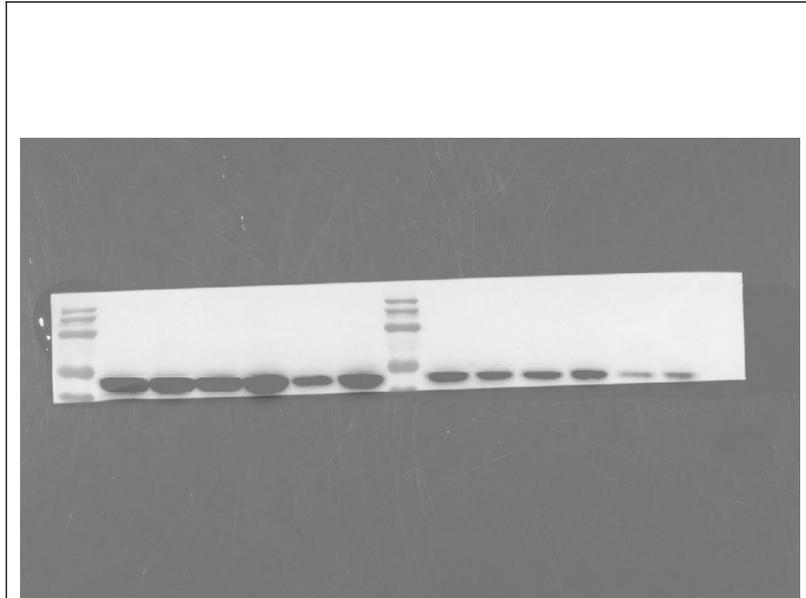
N

**MW:**

55 KD

Lane: 1,2

Right to Left



**Sample name:**

Protein samples of  
0.01MOI WT strain were  
infected in FHL2  
overexpressing  
293T-ACE2 cells for 24  
hours

**Target protein:**

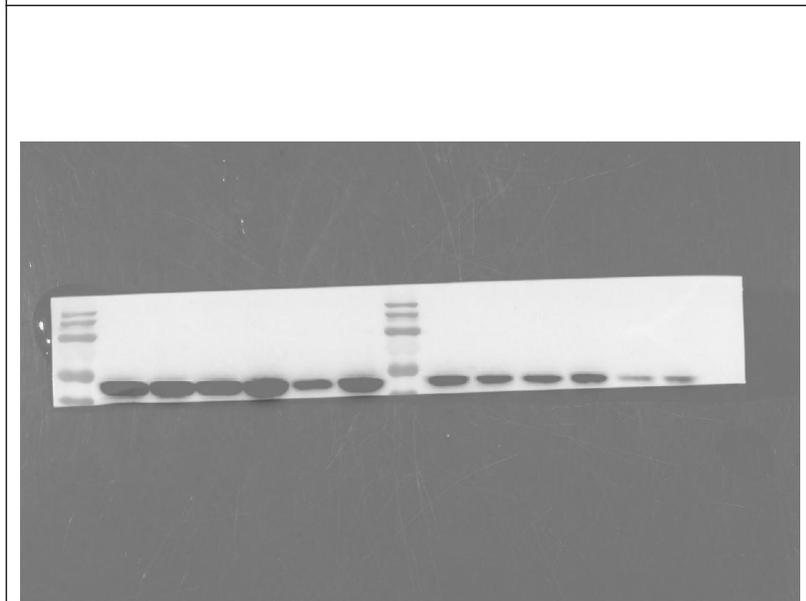
N

**MW:**

55 KD

Lane: 3,4

Right to Left



**Sample name:**

Protein samples of  
0.01MOI WT strain were  
infected in FHL2  
overexpressing  
293T-ACE2 cells for 12  
hours

**Target protein:**

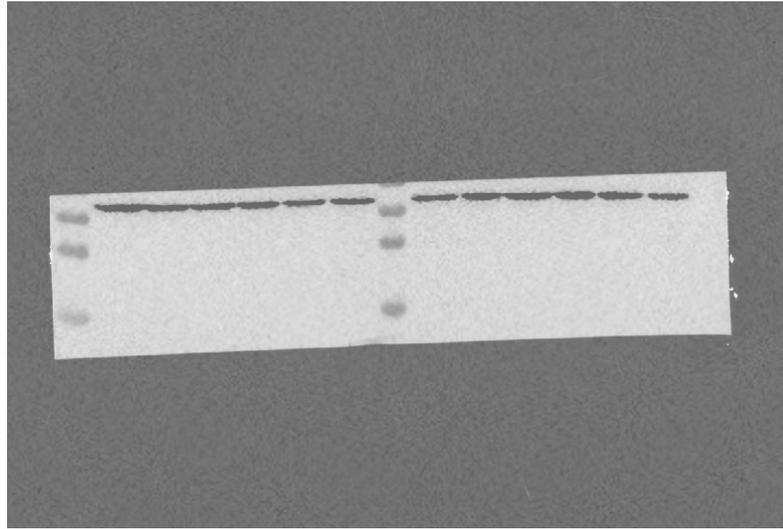
GAPDH

**MW:**

37 KD

Lane: 1,2

Right to Left



**Sample name:**

Protein samples of  
0.01MOI WT strain were  
infected in FHL2  
overexpressing  
293T-ACE2 cells for 24  
hours

**Target protein:**

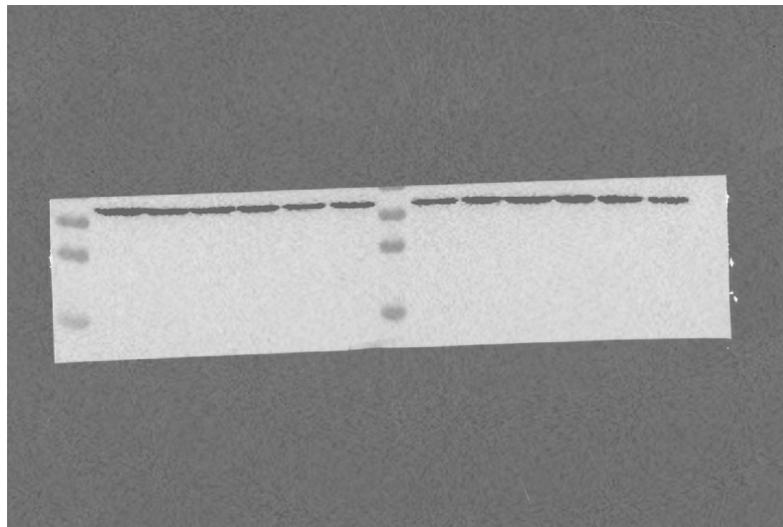
GAPDH

**MW:**

37 KD

Lane: 3,4

Right to Left



**Sample name:**

Protein samples of  
0.01MOI BA.1 strain were  
infected in FHL2  
overexpressing  
293T-ACE2 cells for 12  
hours

**Target protein:**

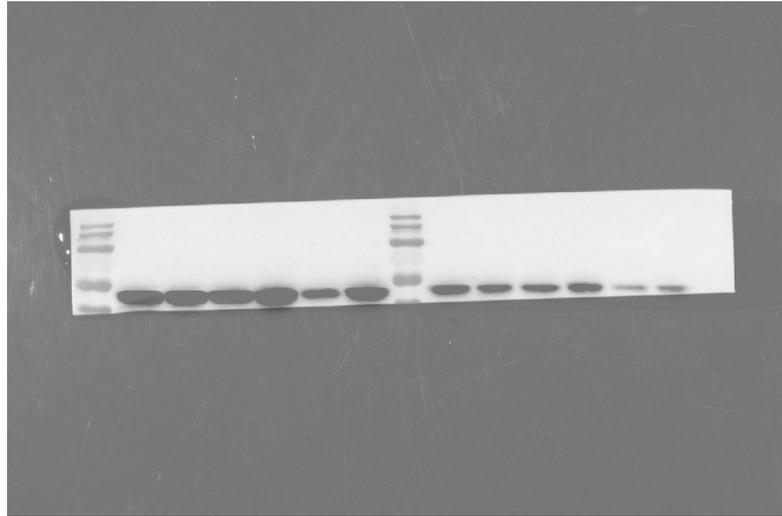
N

**MW:**

55 KD

Lane: 5,6

Left to Right



**Sample name:**

Protein samples of  
0.01MOI BA.1 strain were  
infected in FHL2  
overexpressing  
293T-ACE2 cells for 24  
hours

**Target protein:**

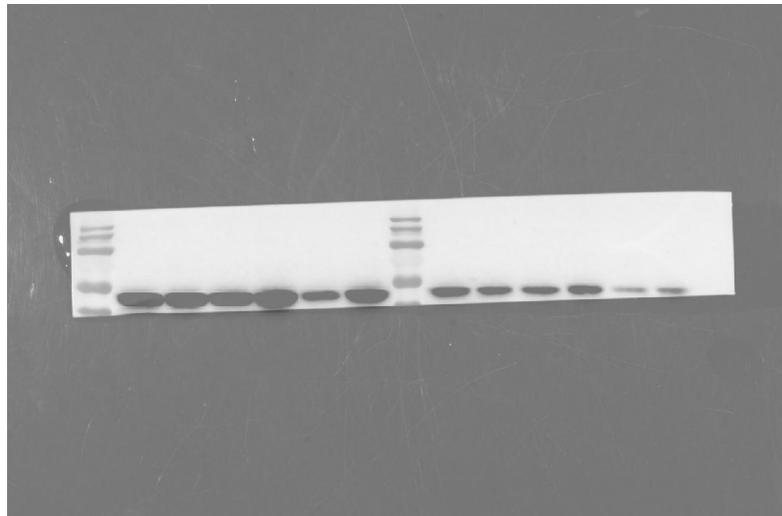
N

**MW:**

55 KD

Lane: 3,4

Left to Right



**Sample name:**

Protein samples of  
0.01MOI BA.1 strain were  
infected in FHL2  
overexpressing  
293T-ACE2 cells for 12  
hours

**Target protein:**

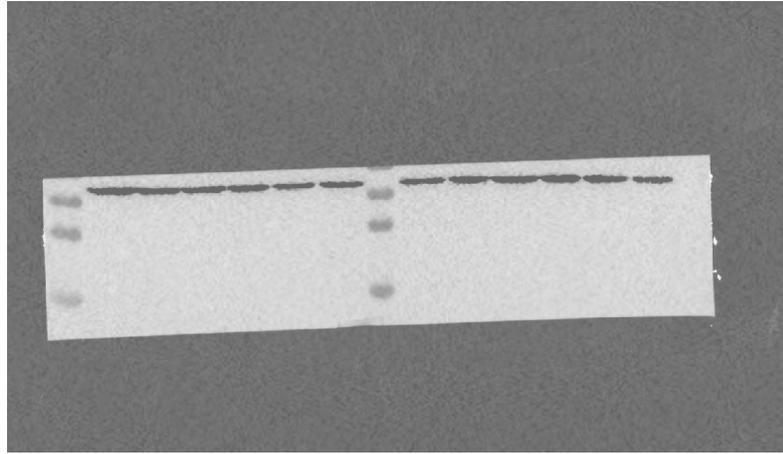
GAPDH

**MW:**

37 KD

Lane: 5,6

Left to Right



**Sample name:**

Protein samples of  
0.01MOI BA.1 strain were  
infected in FHL2  
overexpressing  
293T-ACE2 cells for 24  
hours

**Target protein:**

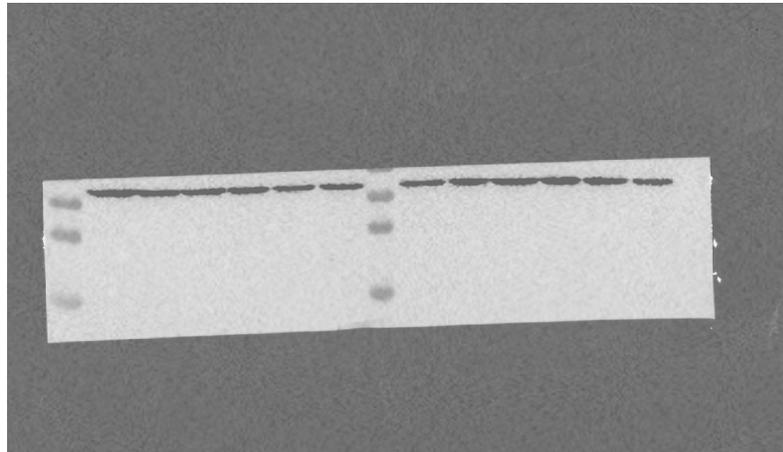
GAPDH

**MW:**

37 KD

Lane: 3,4

Left to Right



**FigS11:Original Western images used for preparing Figure.3E**

**Sample name:**

Protein samples of Caco2 cells transfected with FHL2-his eukaryotic expression plasmid (2  $\mu$ g, 1  $\mu$ g, 0.5  $\mu$ g, 0  $\mu$ g)

**Target protein:**

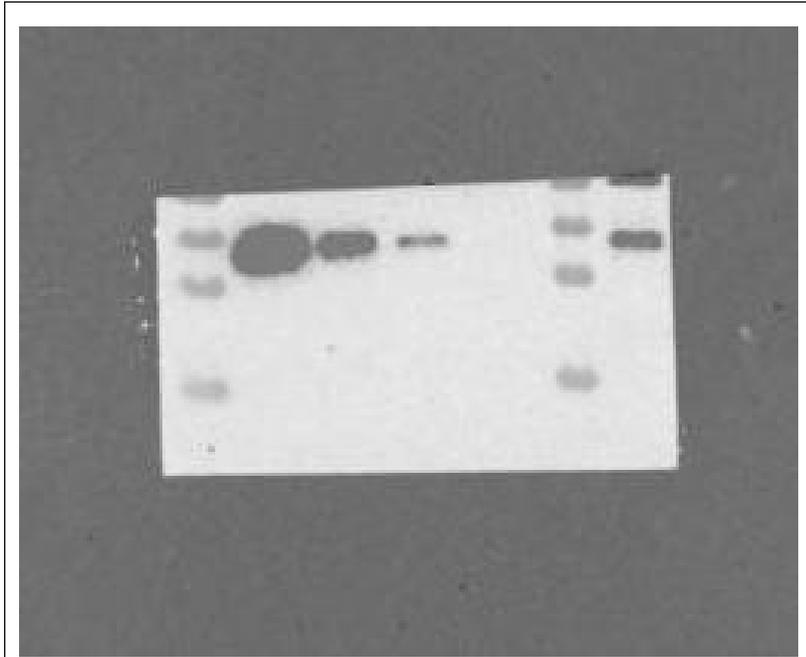
FHL2-his

**MW:**

32 KD

Lane: 1,2,3,4

Left to Right



**Sample name:**

Protein samples of Caco2 cells transfected with FHL2-his eukaryotic expression plasmid (2  $\mu$ g, 1  $\mu$ g, 0.5  $\mu$ g, 0  $\mu$ g)

**Target protein:**

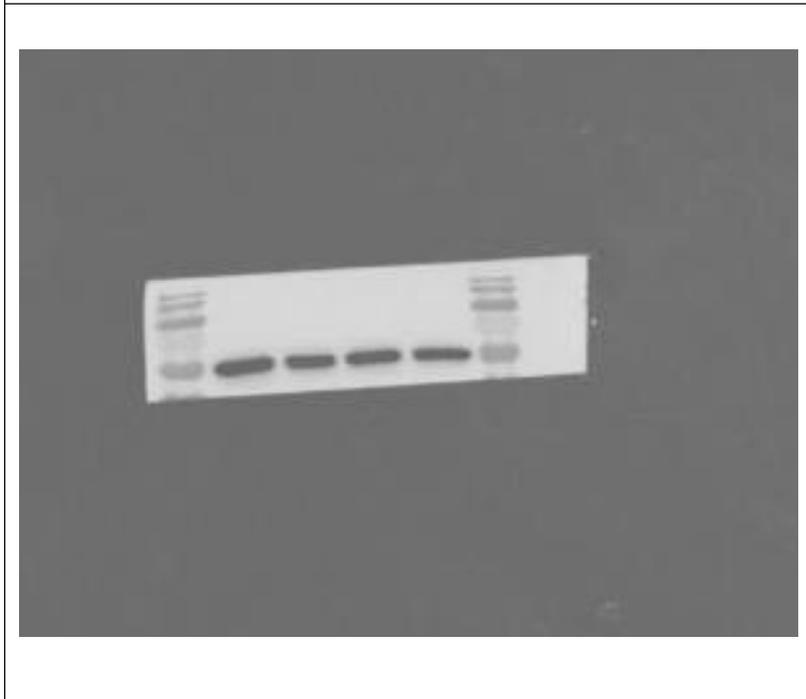
$\alpha$ -tubulin

**MW:**

50 KD

Lane: 1,2,3,4

Left to Right



**Sample name:**

Protein samples of  
0.01MOI WT strain were  
infected in FHL2  
overexpressing  
293T-ACE2 cells for 12  
hours

**Target protein:**

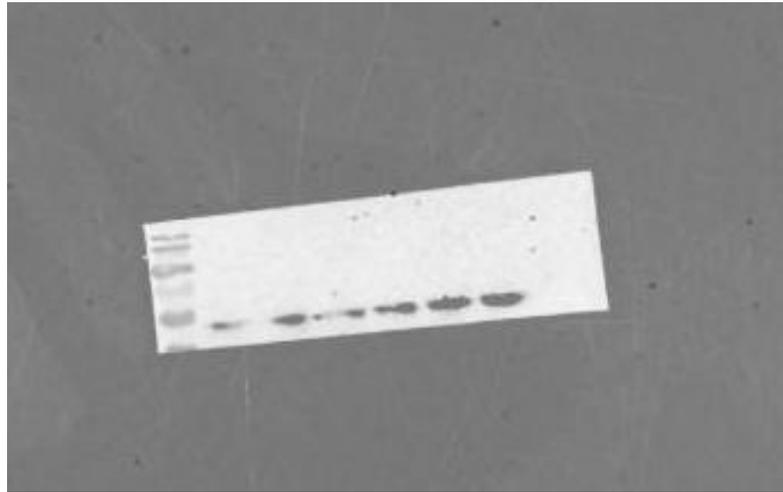
N

**MW:**

55 KD

Lane: 3,4,5,6

Left to Right



**Sample name:**

Protein samples of 0.1MOI  
WT strain were infected in  
FHL2 overexpressing  
Caco2 cells for 12 hours

**Target protein:**

GAPDH

**MW:**

37 KD

Lane: 3,4,5,6

Left to Right

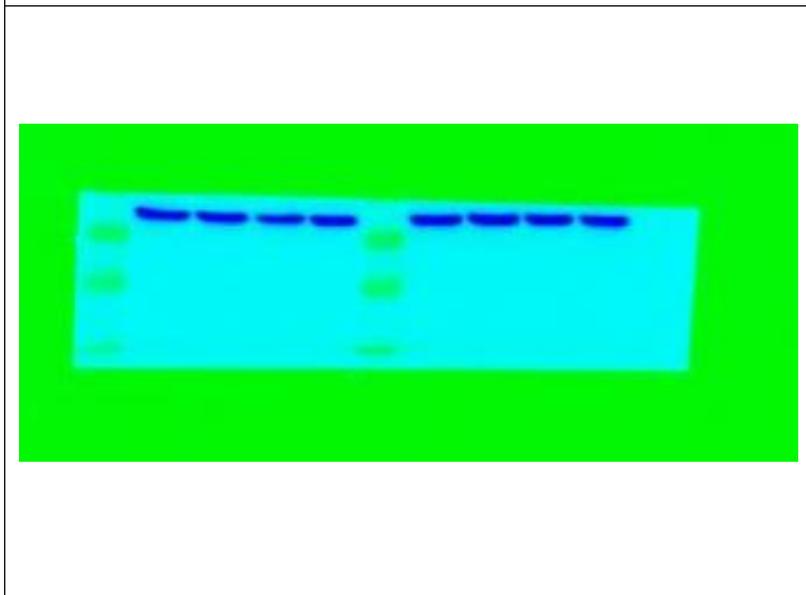


**FigS12:Original Western images used for preparing Figure.5A**

**Sample name:**  
Protein samples of  
transfected with shRNA in  
Caco2 cells  
**Target protein:**  
IRF-3  
**MW:**  
55 KD  
  
Lane: 3,4  
Left to Right



**Sample name:**  
Protein samples of  
transfected with shRNA in  
Caco2 cells  
**Target protein:**  
GAPDH  
**MW:**  
37 KD  
  
Lane: 3,4  
Left to Right



**FigS13:Original Western images used for preparing Figure.5C**

**Sample name:**

Protein samples of Caco2  
cells transfected with  
FHL2-his eukaryotic  
expression plasmid

**Target protein:**

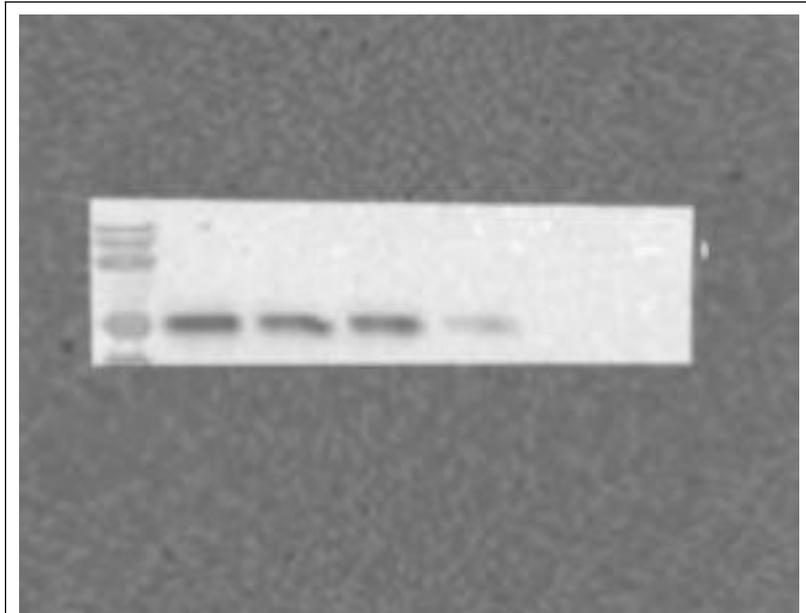
IRF-3

**MW:**

55 KD

Lane: 3,4

Left to Right



**Sample name:**

Protein samples of Caco2  
cells transfected with  
FHL2-his eukaryotic  
expression plasmid

**Target protein:**

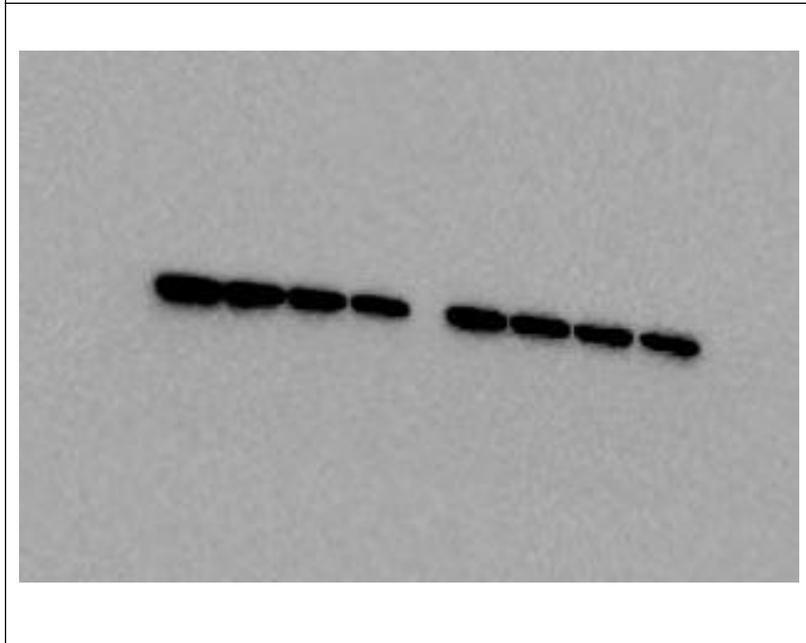
GAPDH

**MW:**

37 KD

Lane: 7,8

Left to Right



**FigS14:Original Western images used for preparing Figure.5E**

**Sample name:**

Protein samples of FHL2  
overexpressing Caco2  
cells stimulated by RNA  
(Nuclei)

**Target protein:**

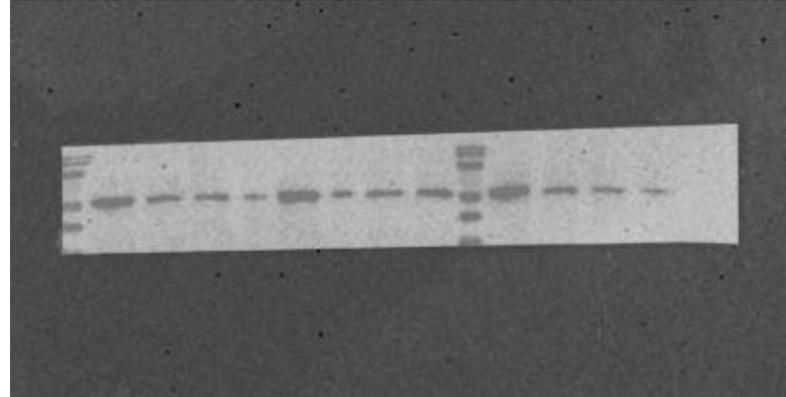
IRF-3

**MW:**

55 KD

Lane: 9,10,11,12

Left to Right



**Sample name:**

Protein samples of FHL2  
overexpressing Caco2  
cells stimulated by RNA  
(Nuclei)

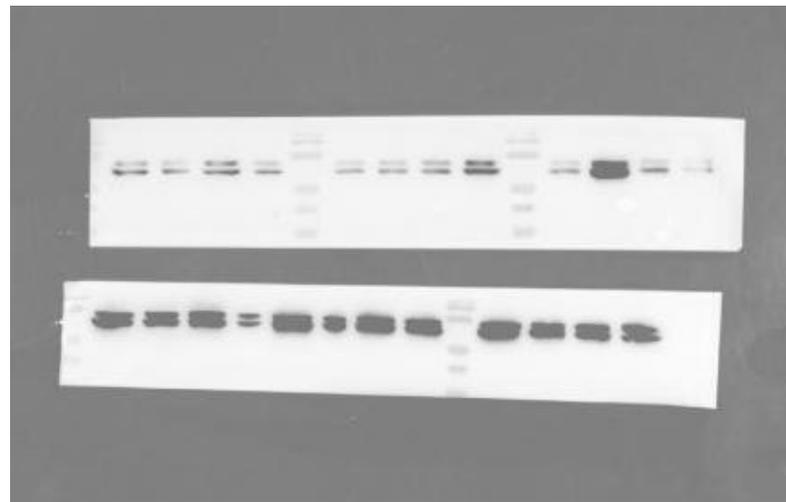
**Target protein:**

Lamin A/C

Second row

Lane: 9,10,11,12

Left to Right



**Sample name:**

Protein samples of FHL2  
overexpressing Caco2  
cells stimulated by RNA  
(Cyto)

**Target protein:**

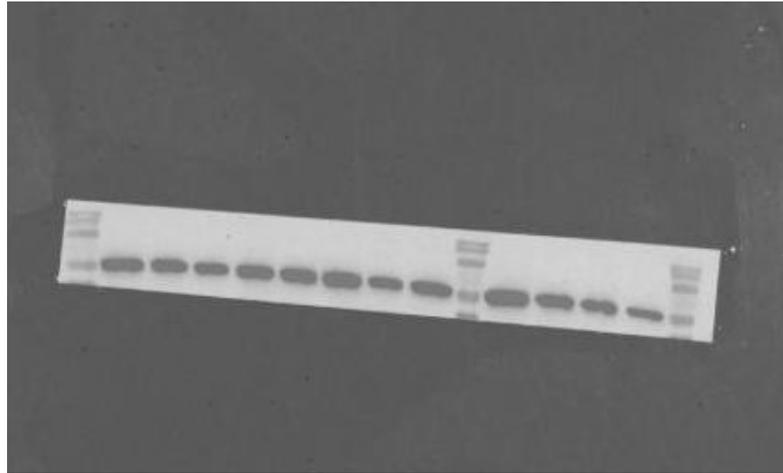
IRF-3

**MW:**

55 KD

Lane: 9,10,11,12

Left to Right



**Sample name:**

Protein samples of FHL2  
overexpressing Caco2  
cells stimulated by RNA  
(Cyto)

**Target protein:**

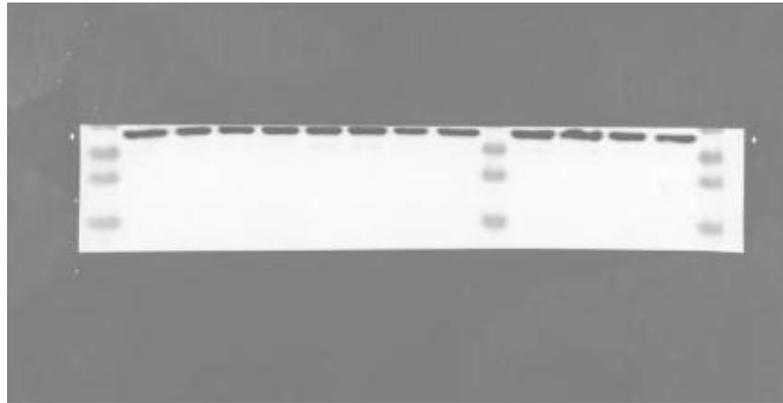
GAPDH

**MW:**

37 KD

Lane: 9,10,11,12

Left to Right



**Sample name:**

Protein samples of FHL2  
overexpressing Caco2  
cells stimulated by RNA

(Total)

**Target protein:**

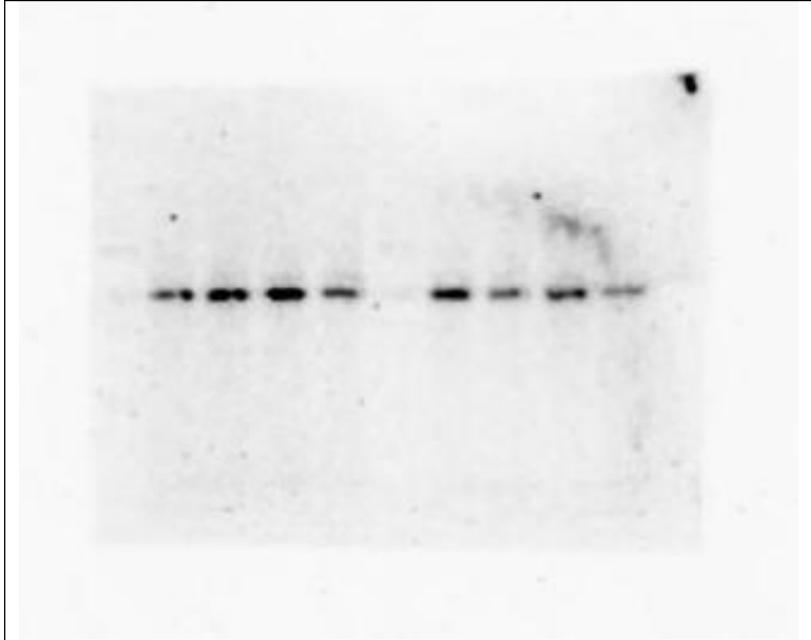
IRF-3

**MW:**

55 KD

Lane: 5,6,7,8

Left to Right



**Sample name:**

Protein samples of FHL2  
overexpressing Caco2  
cells stimulated by RNA

(Total)

**Target protein:**

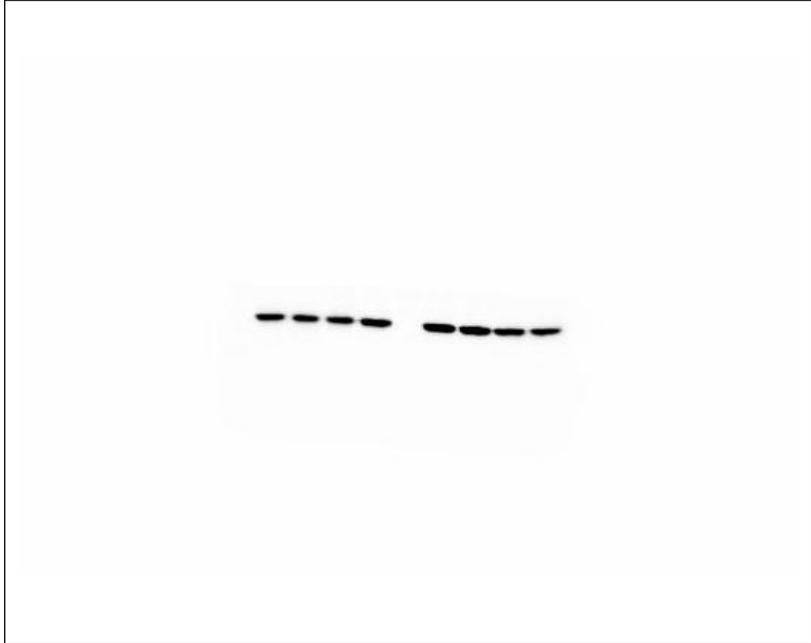
GAPDH

**MW:**

37 KD

Lane: 5,6,7,8

Left to Right



**FigS15:Original Western images used for preparing Figure.5F**

**Sample name:**

Protein samples of FHL2  
overexpressing Caco2  
cells stimulated by virus

**Target protein:**

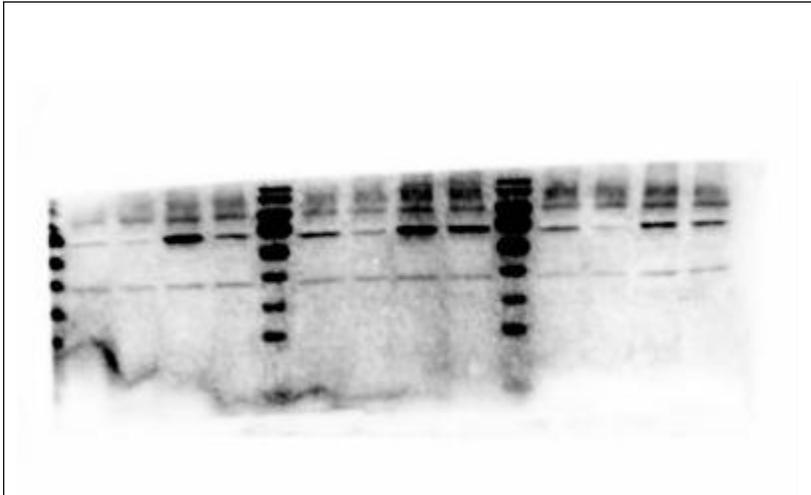
P-IRF-3

**MW:**

55 KD

Lane: 3,4,5,6

Right to Left



**Sample name:**

Protein samples of FHL2  
overexpressing Caco2  
cells stimulated by virus

**Target protein:**

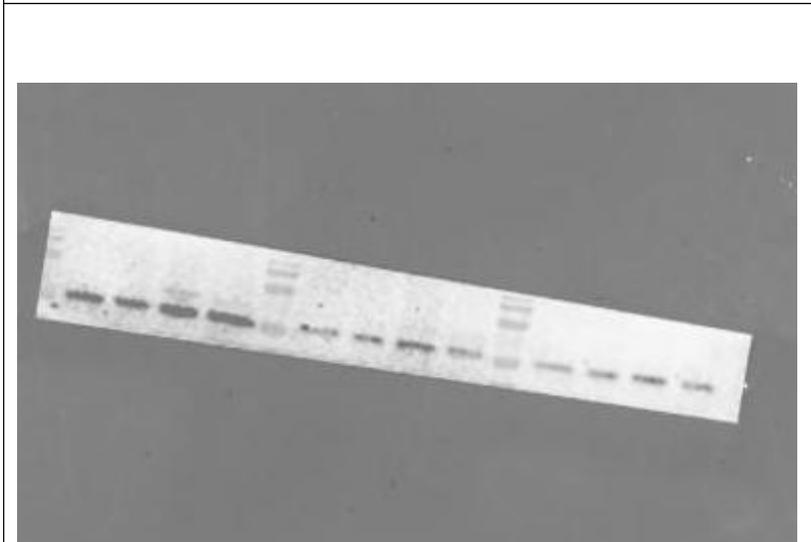
IRF-3

**MW:**

55 KD

Lane: 3,4,5,6

Right to Left



**Sample name:**

Protein samples of FHL2  
overexpressing Caco2  
cells stimulated by virus

**Target protein:**

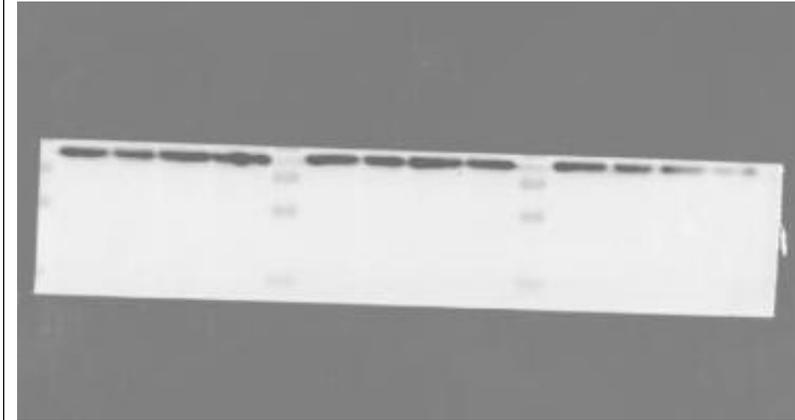
GAPDH

**MW:**

37 KD

Lane: 3,4,5,6

Right to Left



**FigS16:Original Western images used for preparing Figure.5F**

**Sample name:**

Protein samples of FHL2  
knockdown Caco2 cells  
stimulated by virus

**Target protein:**

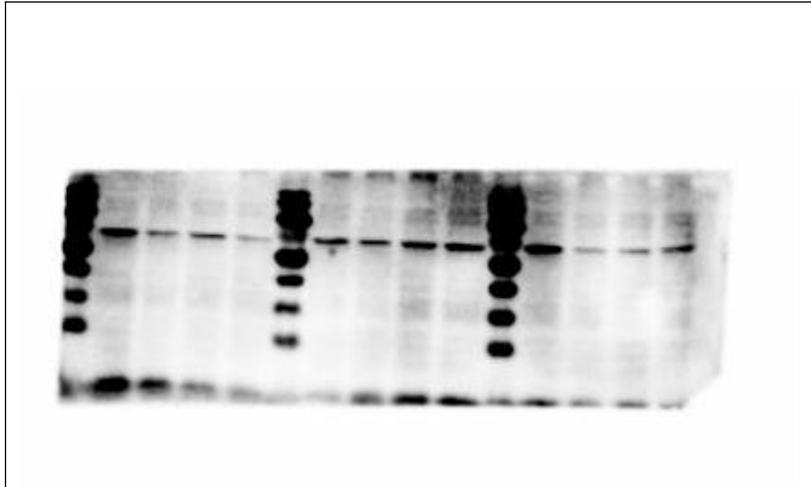
P-IRF-3

**MW:**

55 KD

Lane: 1,2,3,4

Left to Right



**Sample name:**

Protein samples of FHL2  
knockdown Caco2 cells  
stimulated by virus

**Target protein:**

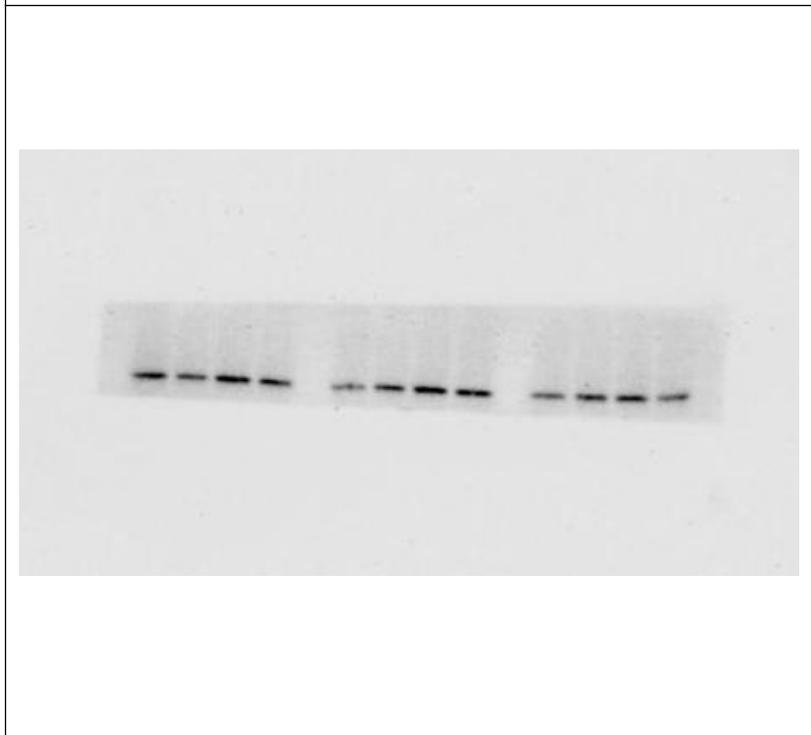
IRF-3

**MW:**

55 KD

Lane: 1,2,3,4

Left to Right



**Sample name:**

Protein samples of FHL2  
knockdown Caco2 cells  
stimulated by virus

**Target protein:**

GAPDH

**MW:**

37 KD

Lane: 1,2,3,4

Left to Right

