

# HIV-1 gp41 transmembrane oligomerization monitored by FRET and FCS

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## Used HIV-1 gp41 constructs

ENV\_HV1H2: HIV-1 envelope glycoprotein gp41 - residues 1-856.

HIV-1 gp41 residues 512 – 856.

### 1-194 (512- 705)

```
      10          20          30          40          50          60
AVGIGALFLG FLGAAGSTMG AASMTLTVQA RQLLSGIVQQ QNNLLRAIEA QQHLLQLTVW

      70          80          90         100         110         120
GIKQLQARIL AVERYLKDQQ LLGIWGCSGK LICTTAVPWN ASWSNKSLEQ IWNHTTWMEW

      130         140         150         160         170         180
DREINNYTSL IHSLIEESQN QQEKNEQELL ELDKWASLWN WFNITNWLWY IKLFIMIVGG

      190
LVGLRIVFAV LSIV
```

*For FRET study, cysteines (red) at 87 and 93 substituted for alanine. Serine 192 (blue) substituted for cysteine for site-specific labelling.*

### 27-194 (538 – 705)

```
      10          20          30          40          50          60
TVQARQLLSG IVQQQNNLLR AIEAQQHLLQ LTVWGIKQLQ ARILAVERYL KDQQLLGIWG

      70          80          90         100         110         120
CSGKLICTTA VPWNASWSNK SLEQIWNHTT WMEWDREINN YTSLIHSLIE ESQNQQEKNE

      130         140         150         160
QELLELDKWA SLWNWFNITN WLWYIKLFIM IVGGLVGLRI VFAVLSIV
```

### 27-194 LD (538 – 588 (SGRGG) 622-705)

```
      10          20          30          40          50          60
TVQARQLLSG IVQQQNNLLR AIEAQQHLLQ LTVWGIKQLQ ARILAVERYL KSGRGGIWN

      70          80          90         100         110         120
HTTWMEWDRE INNYTSLIHS LIEESQNQQE KNEQELLELD KWASLWNWFN ITNWLWYIKL

      130         140
FIMIVGGLVG LRIVFAVLSI V
```

**27-154 (538 - 665)**

10 20 30 40 50 60  
TVQARQLLSG IVQQQNNLLR AIEAQQHLLQ LTVWGIKQLQ ARILAVERYL KDQQLLGIWG  
70 80 90 100 110 120  
CSGKLICTTA VPWNASWSNK SLEQIWNHTT WMEWDREINN YTSLIHSLIE ESQNQQEKNE

QELLELDK

**27-154 LD (538 - 588 (SGRGG ) 622-665)**

10 20 30 40 50 60  
TVQARQLLSG IVQQQNNLLR AIEAQQHLLQ LTVWGIKQLQ ARILAVERYL KSGRGGIWN  
70 80 90 100  
HTTWMEWDRE INNYTSLIHS LIEESQNQQE KNEQELLELD K