

Supplementary material to:

SARS-CoV-2 ORF 3a-mediated currents are inhibited by antiarrhythmic drugs

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Figure S1:

	K61	K75	
Wuhan-Hu-1	LPGWLVIVGVALAVFQSASK	IITLKKRWQLALS	KGVHFVCNLLLLFVTVYSHLLLVAAG 100
BavPat1	LPGWLVIVGVALAVFQSASK	IITLKKRWQLALS	KGVHFVCNLLLLFVTVYSHLLLVAAG 100
Alpha(B.1.1.7)	LPGWLVIVGVALAVFQSASK	IITLKKRWQLALS	KGVHFVCNLLLLFVTVYSHLLLVAAG 100
Beta(B.1.351)	LPGWLVIVGVALAVFQSASK	IITLKKRWQLALS	KGVHFVCNLLLLFVTVYSHLLLVAAG 100
Gamma(P.1)	LPGWLVIVGVALAVFQSASK	IITLKKRWQLALS	KGVHFVCNLLLLFVTVYSHLLLVAAG 100
Delta(B.1.617.2)	LPGWLVIVGVALAVFQSASK	IITLKKRWQLALS	KGVHFVCNLLLLFVTVYSHLLLVAAG 100
Omicron(B.1.1.529)	LPGWLVIVGVALAVFQSASK	IITLKKRWQLALS	KGVHFVCNLLLLFVTVYSHLLLVAAG 100
Zeta(P.2)	LPGWLVIVGVALAVFQSASK	IITLKKRWQLALS	KGVHFVCNLLLLFVTVYSHLLLVAAG 100
Lambda(C.37)	LPGWLVIVGVALAVFQSASK	IITLKKRWQLALS	KGVHFVCNLLLLFVTVYSHLLLVAAG 100
	*****	*****	*****
	D142		
Wuhan-Hu-1	VRIIMRLWLCWKCRSKNPLLYD	ANYFLCWHTNCYDYCIPYNSVTSSIVITSGDGTSPIS	180
BavPat1	VRIIMRLWLCWKCRSKNPLLYD	ANYFLCWHTNCYDYCIPYNSVTSSIVITSGDGTSPIS	180
Alpha(B.1.1.7)	VRIIMRLWLCWKCRSKNPLLYD	ANYFLCWHTNCYDYCIPYNSVTSSIVITSGDGTSPIS	180
Beta(B.1.351)	VRIIMRLWLCWKCRSKNPLLYD	ANYFLCWHTNCYDYCIPYNSVTSSIVITLGDGTSPIS	180
Gamma(P.1)	VRIIMRLWLCWKCRSKNPLLYD	ANYFLCWHTNCYDYCIPYNSVTSSIVITSGDGTSPIS	180
Delta(B.1.617.2)	VRIIMRLWLCWKCRSKNPLLYD	ANYFLCWHTNCYDYCIPYNSVTSSIVITSGDGTSPIS	180
Omicron(B.1.1.529)	VRIIMRLWLCWKCRSKNPLLYD	ANYFLCWHTNCYDYCIPYNSVTSSIVITSGDGTSPIS	180
Zeta(P.2)	VRIIMRLWLCWKCRSKNPLLYD	ANYFLCWHTNCYDYCIPYNSVTSSIVITSGDGTSPIS	180
Lambda(C.37)	VRIIMRLWLCWKCRSKNPLLYD	ANYFLCWHTNCYDYCIPYNSVTSSIVITSGDGTSPIS	180
	*****	*****	*****

SARS-CoV2 ORF3a amino acids K61, K75 and D142 are highly conserved among clinically common SARS-CoV2 strains

Protein sequence alignment of ORF 3a protein sequences, derived from different clinically relevant SARS-CoV2 strains, showing the high degree of conservation among the amino acid residues lysine 61 (K61), lysine 75 (K75), and aspartic acid 142 (D142), identified to contribute to the molecular binding site of class III antiarrhythmic drugs. *, conserved amino acid.

ORF 3a antibody test:

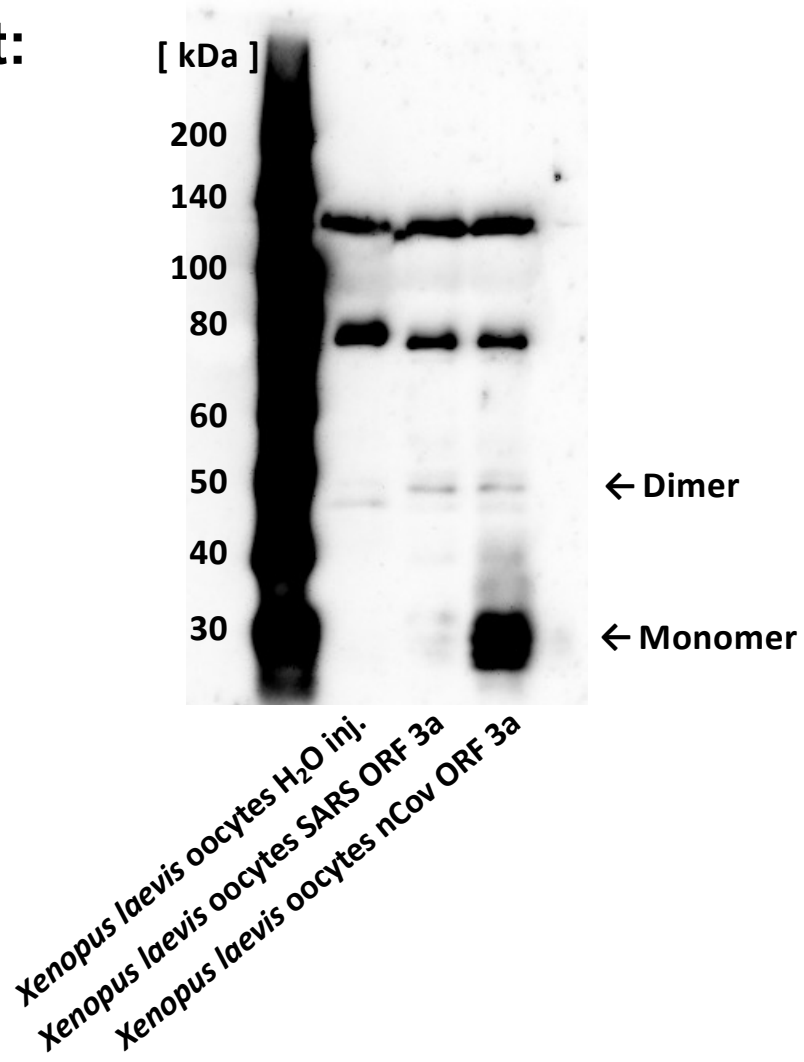


Figure 1a – Membrane 1 – ORF 3a

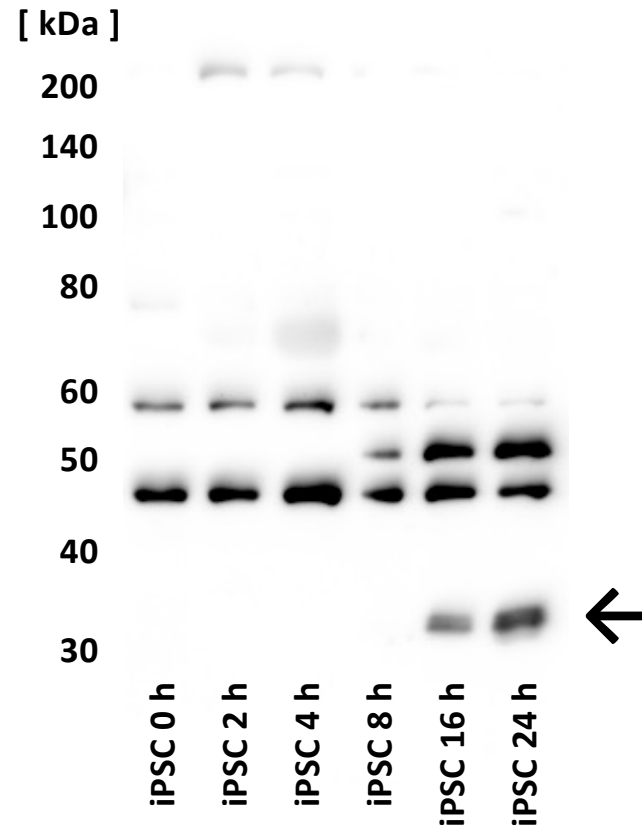


Figure 1a – Membrane 2 – ORF 3a

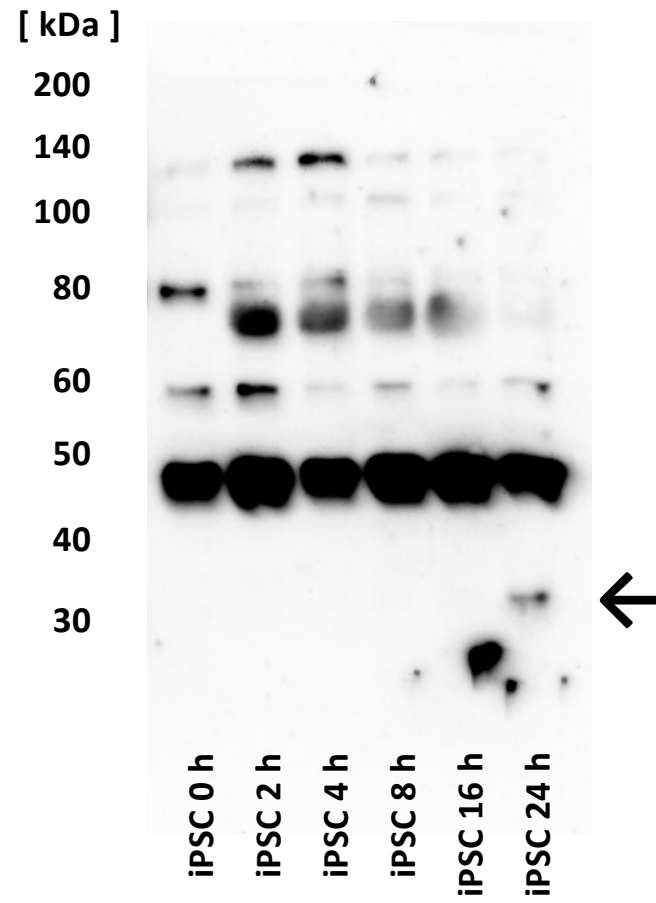


Figure 1a – Membrane 3 – ORF 3a

[kDa]

200

140

100

80

60

50

40

30

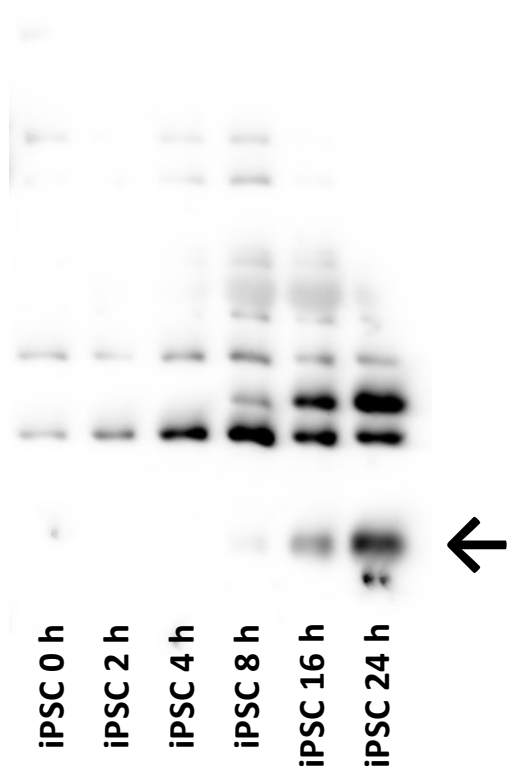


Figure 1a – Membrane 1 – β -actin

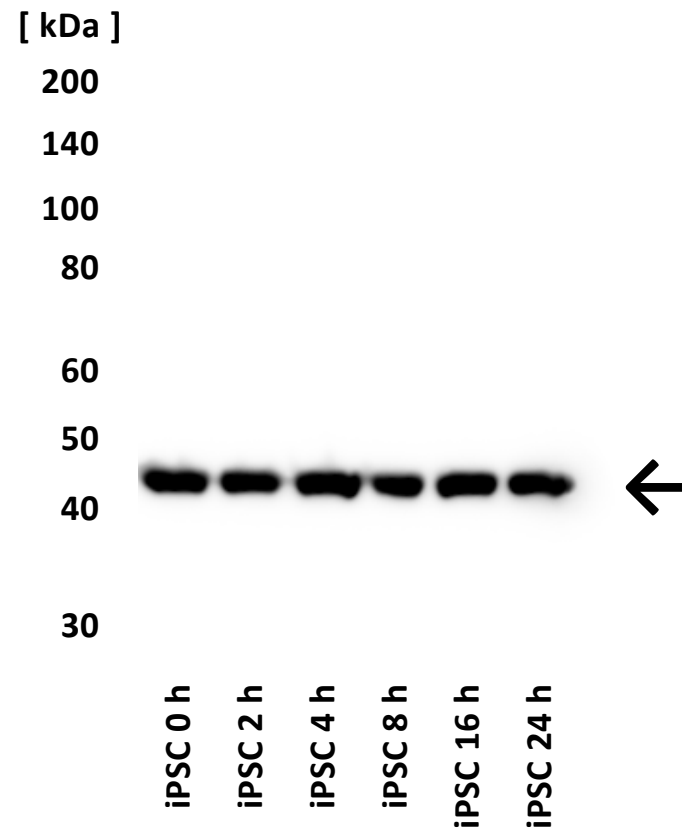


Figure 1a – Membrane 2 – β -actin

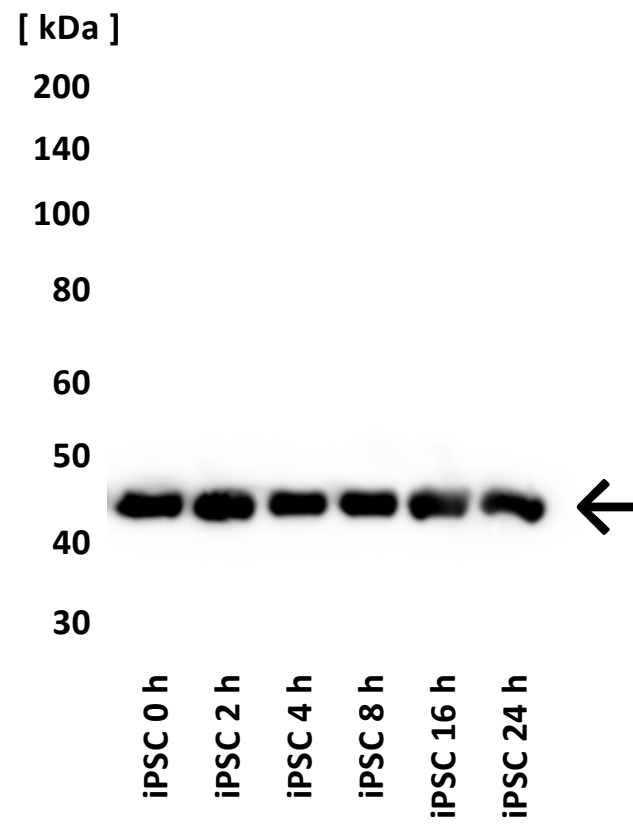


Figure 1a – Membrane 3 – β -actin

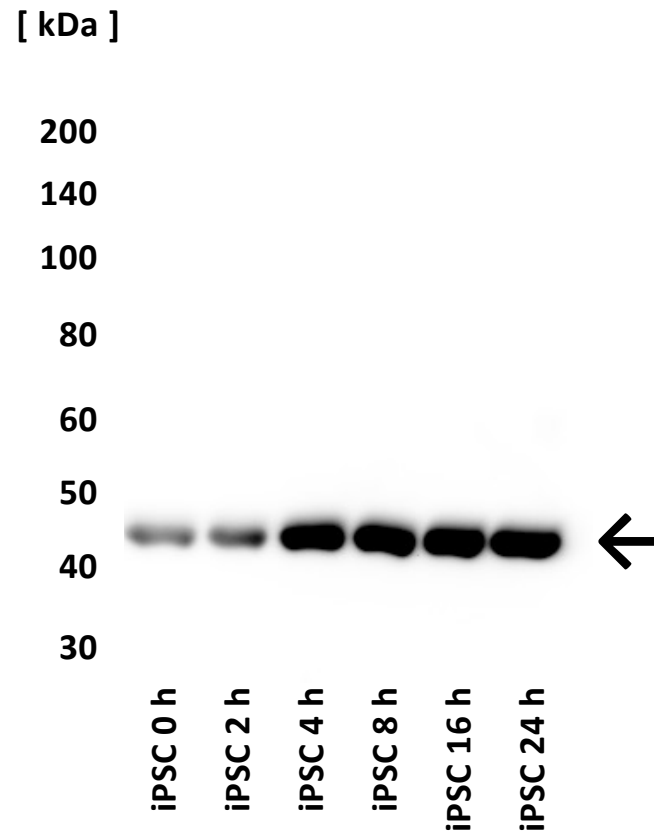


Figure 1b – Membrane 1 – ORF 3a

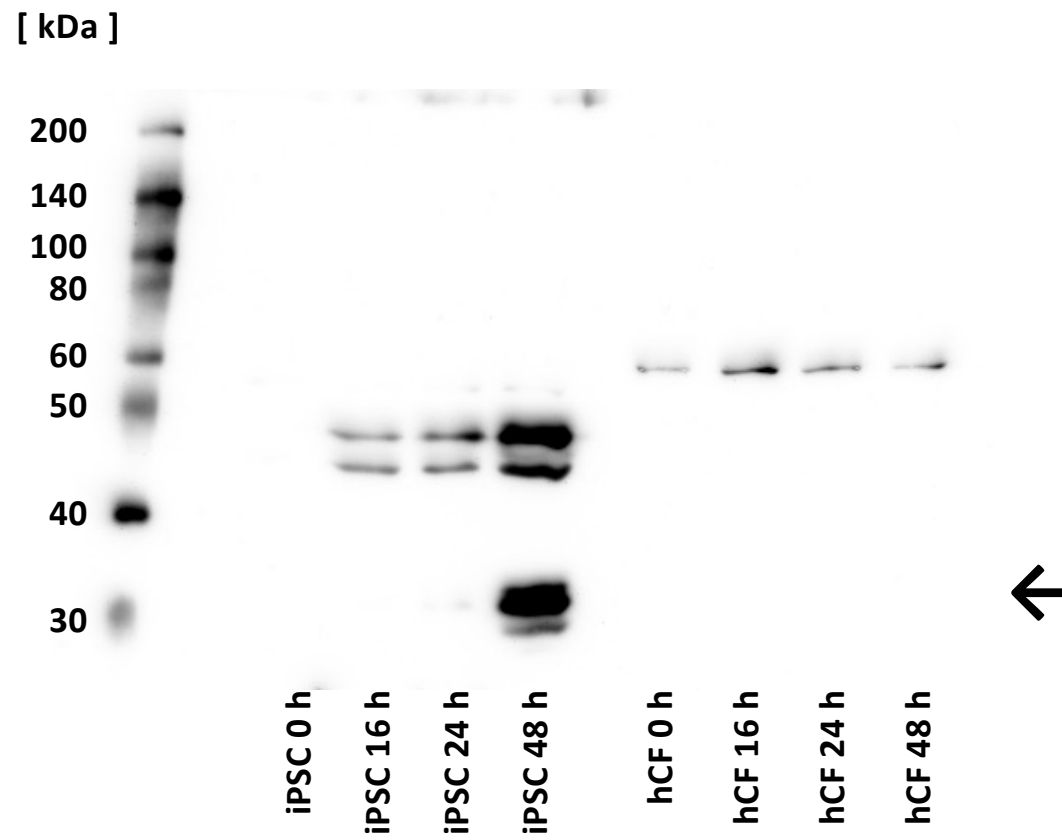


Figure 1b – Membrane 2 – ORF 3a

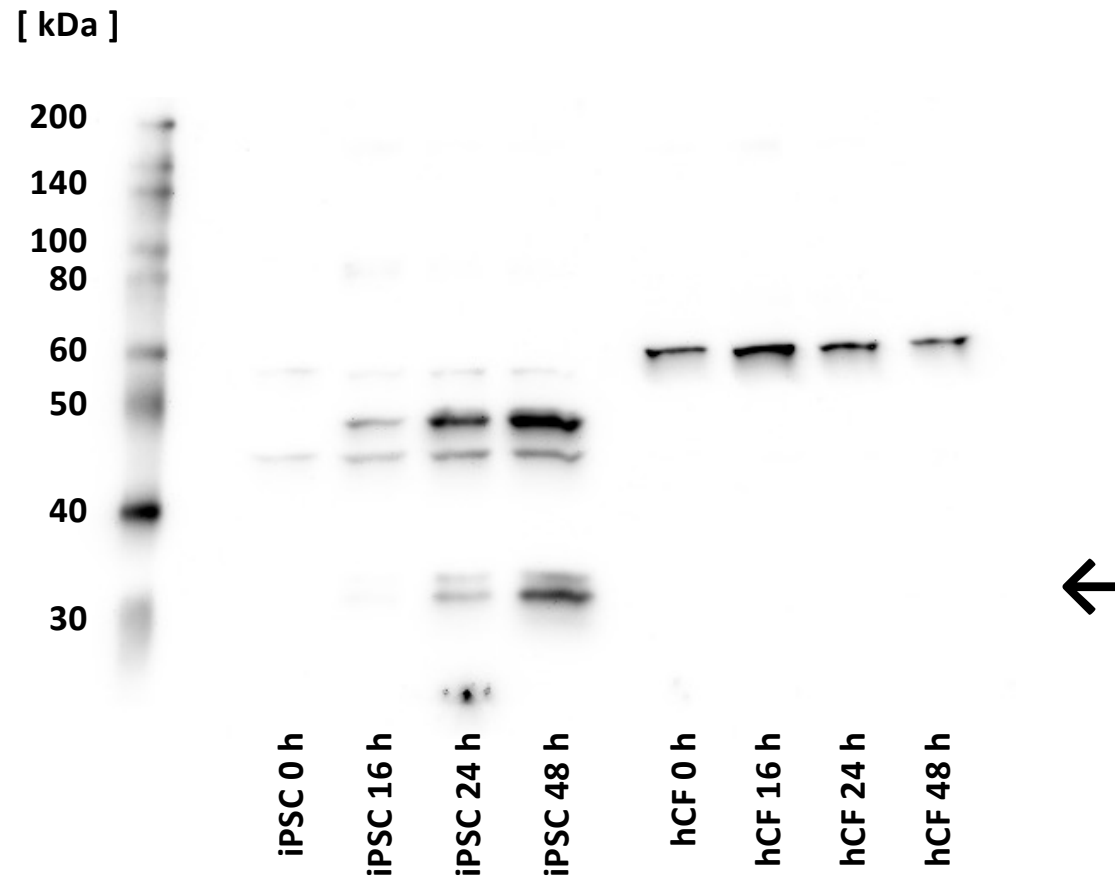


Figure 1b – Membrane 3 – ORF 3a

[kDa]

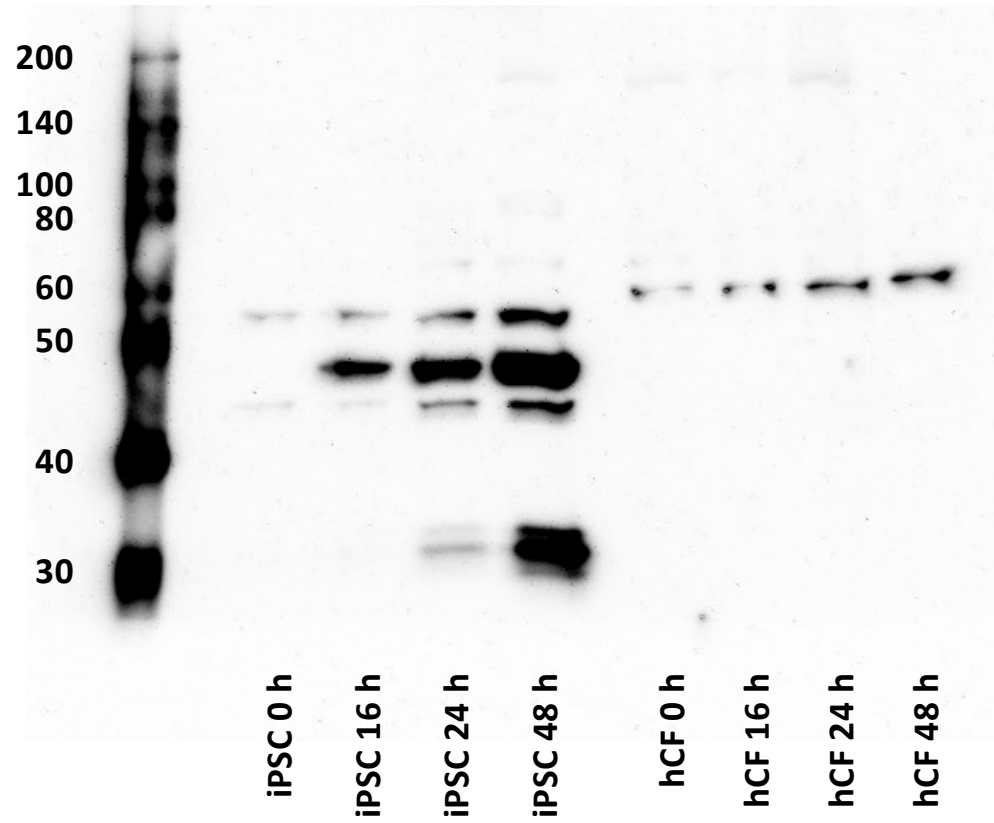


Figure 1b – Membrane 1 – β -actin

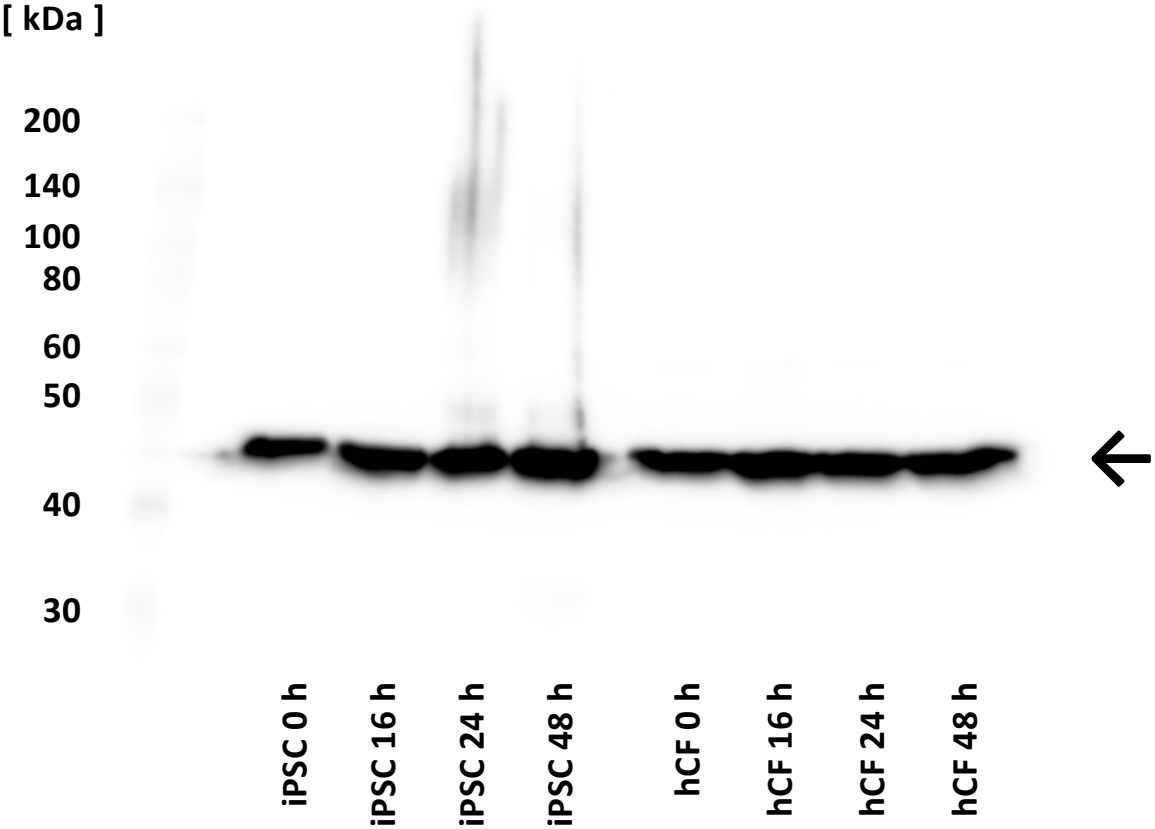


Figure 1b – Membrane 2 – β -actin

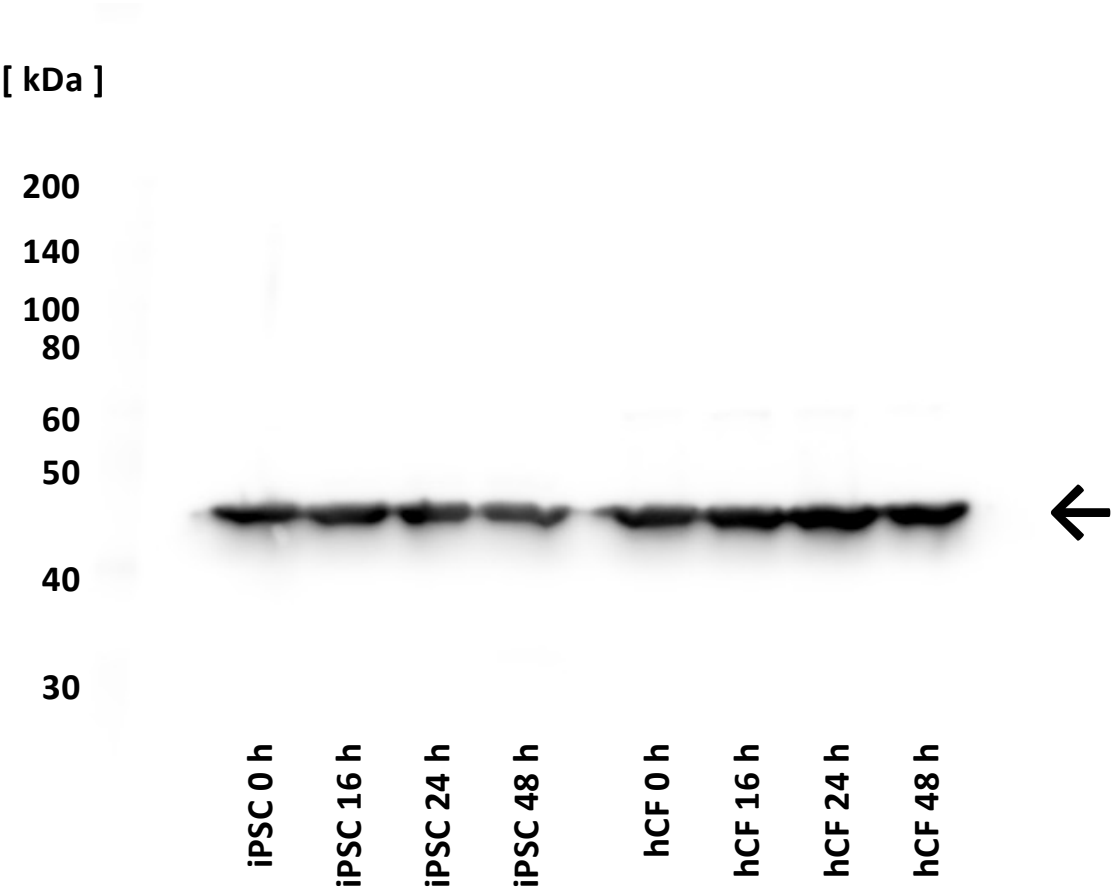


Figure 1b – Membrane 3 – β -actin

