



Synthelis®

## Porin

Protein Catalog

OprF - Outer membrane porin F

# PL045

### Product specification

**Acronym:** OprF

**Origin species :** *Pseudomonas aeruginosa*

**Protein reference :** P13794 (UniProtKB)

**Family:** Porin

**Expression system:** *E.coli* based CFPS

**Format:** Proteoliposomes

**Protein sequence:** Met1 – Lys350

**Tag :** 6xHis tag (N-terminal)

**Cleavage site:** Factor Xa

**Product MW:** 40 kDa

**Application:** Vaccine, antibody development, structural biology

### Product description

OprF is a porin present in high abundance in *P. aeruginosa* with 100,000 to 300,000 copies per bacteria. OprF has an important structural role in the bacterial wall, with its C-terminal part located in the periplasm and capable of binding to the peptidoglycan. The N-terminal part of OprF crosses the membrane eight times, conferring a pore-forming activity that regulates the bacteria's ability to grow in a low-osmolarity environment. OprF protein is highly conserved and antigenically related among all serotypes of *P. aeruginosa* making this target a good immunogen for vaccine development.

### Recombinant protein sequence

**His tag – factor X cleavage site –**

KLKNTLGVVIGSLVAASAMNAFAQGQNSVEIEAFGKRYFTDSVRNMKNADLYGGSIGYFLTDDVELALSUGEYHDVVRGTYETGNK  
KVHGNLTSLDAIYHFGTTPGVGLRPYVSAGLAHQNITNINSQGRQOMTMANIGAGLKYYFTENFFAKASLDGQYGLEKRDNGH  
QGEWMAGLVGFNFGGSKAAPAPEPVADVCSDSNDGVCDNVDKCPDTPANVTVDANGCPAAEVVVRVQLDVKFDKSKVKE  
NSYADIKNLADFMKQYPSTSTTVEGHTDSVGTDAYNQKLSERRANAVRDVLVNEYGVEGGRVNAVGYGESRPVADNATAEGRAIN  
RRVEAEVEAEAK



## Quality analysis

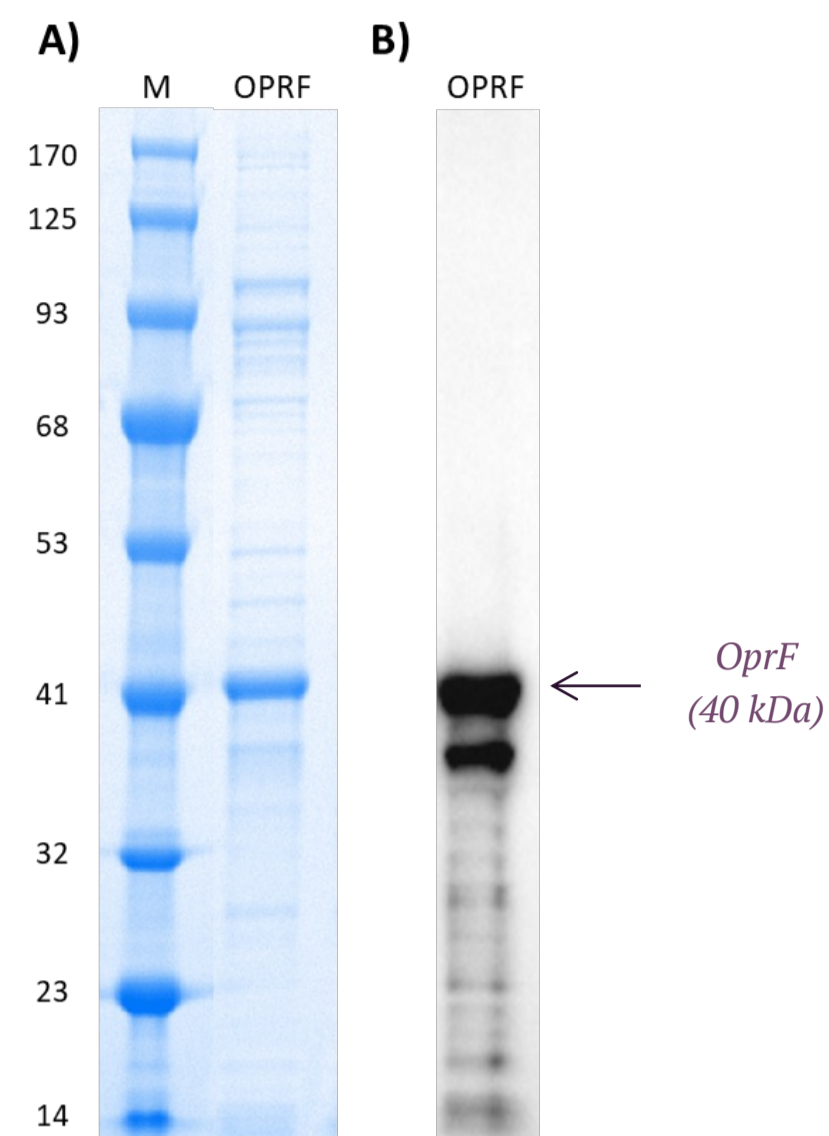
### Purity:

Liposomes are directly incorporated into the Cell-Free reaction, thus, some impurities from the *E.coli* lysate might be present in the proteoliposomes.

A negative control (proteoliposomes without the protein of interest) can be provided (useful for screening, immunization...).

The purity can be improved by protein expression in detergent and relipidation after purification step(s).

**Purification procedure:** OprF proteoliposomes are purified on a sucrose gradient.



**Fig.1:** Identification of OprF in proteoliposomes by **A)** Coomassie-blue stained SDS-PAGE and **B)** Western Blot using an anti-6xHis antibody.

## Formulation

**Buffer:** Available in Hepes 50mM, pH 7.5 with cryoprotectants. Other buffers or customized formulation can be provided upon request.

**Customized Hydrophobic matrix:** Customized formulation with specific lipids like PEGylated or biotinylated lipids can be used upon request, as well as targeting molecules.

**Storage/Stability:** Store at +4°C for up to one week or several months at -80°C. Aliquot for storage.  
Do not freeze-thaw after aliquoting.

**Use restrictions:** For life science research use only.

**Available sizes:** 10 µg, 50 µg, 100 µg, customized quantity on request.



Need a specific amount, a quote or any additional information?  
Contact-us



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