Porin

OEP24 - Outer envelope pore protein 24, chloroplaste # PL040

Product specification

Acronym: OEP24
Synonyms:
Origin species : Plant
Protein reference : O49929 (UniProtKB)
XP_050892991.1 (GenBank)
Family: Porin

Expression system: E.coli based CFPS
Format: Proteoliposomes
Protein sequence: Met1 – Met213
Tag : 6xHis tag (N-ter)
Cleavage site: Factor Xa
Product MW: 24 kDa
Application: Drug screening & discovery, antibody development, structural biology

Product description

High-conductance voltage-dependant solute channel with a slight selectivity for cations transporting triose phosphates, dicarboxylic acids, ATP, inorganic phosphate (Pi), sugars and positively or negatively charged amino acids.

Recombinant protein sequence

His tag – factor X cleavage site –
MKAALKGKYDLDHNSSGAATVAFNAGDVKLRASITDATFKNSPSLTGLVLAVEKPGSFSVDYNVPKKDFRFQFMNTVRVAEKPLN LAYIHSKGDNRTILDGTLVWDPSNKVSANYAVESGNCKLKYSYNHKGLTTIEPTYDVAKNSWDFAVSGKVYGDDSLKASYQTSSKV LGLEWTRNSKQTGCFKVVASVNLAEEKKIPKLSVESTLNFEM

Quality analysis

Purity: > 60% determined by SDS-PAGE stained by Coomassie Blue.

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

Purification procedure: OEP24 proteoliposomes are purified on a sucrose gradient.

Fig.1: *Identification of OEP24 in the proteoliposomes by Western Blot analysis using an anti-6xHis antibody.*

Assessment of functionality

Method: Patch clamp

Results:

Multiple conductance levels were observed (Fig. 3A and C). The most frequently detected conductances were 83 and 300 pS (Fig. 3B). OEP24 proteoliposomes are fully active in transport of solutes and present multiple conductance levels (Fig. 2).

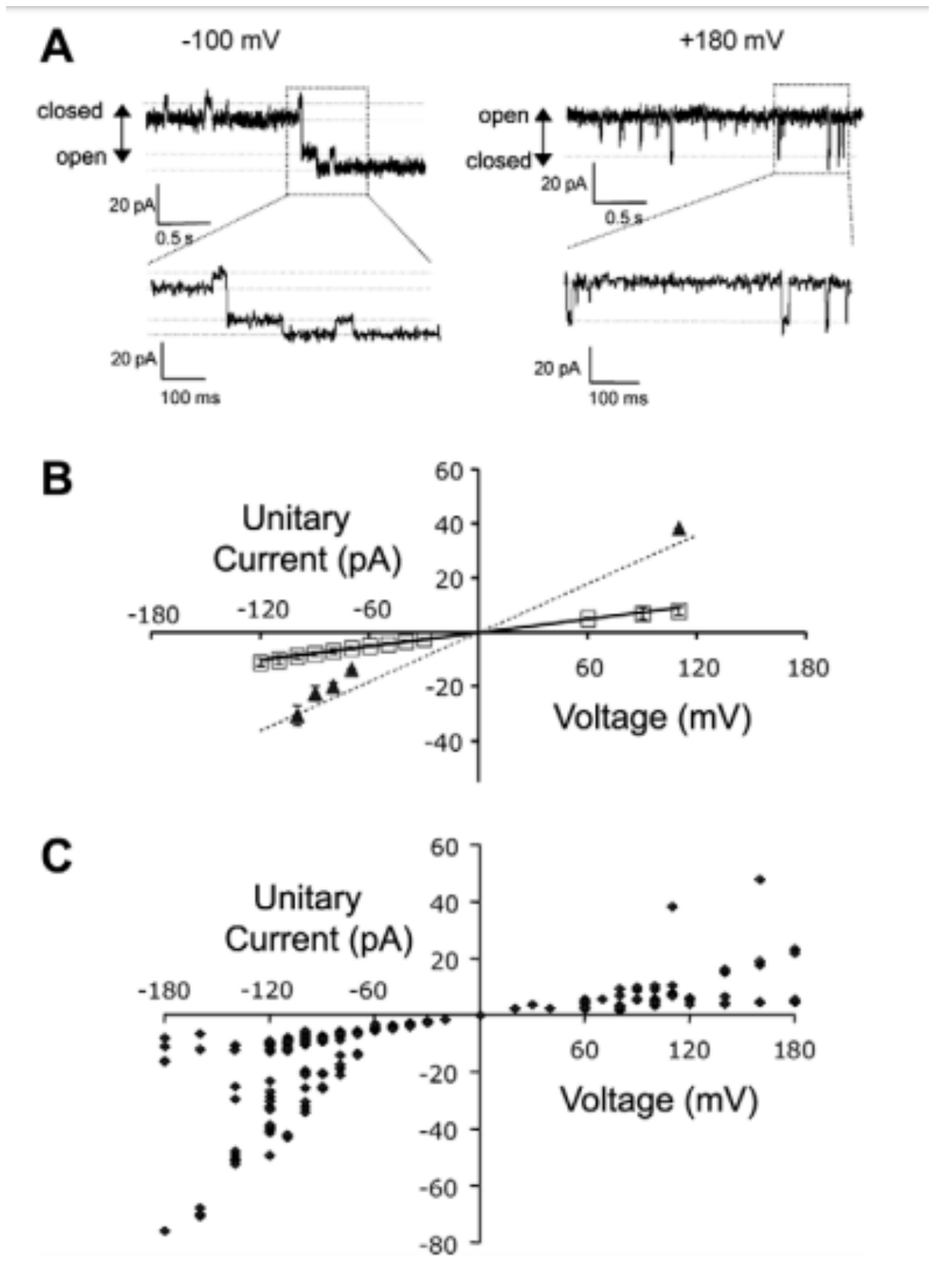


Fig.2*: Electrophysiological characterization of OEP24. Inside-out patch-clamp experiments were performed on giant liposomes incorporating OEP24.*

(A) *Representative recordings of single channels at 2 voltages and 2 different time scales.*

(B) *Unitary current vs. voltage relationship of single channels from one patch (each data point represents the average of at least 3 measurements). Linear regression of the lower current values (squares) yielded an 83 pS conductance (solid line). Larger currents (triangles) were too dispersed for fitting but could correspond to a previously reported 300 pS conductance (dashed line).*

(C) *Unitary currents observed at different voltages in all tested patches.*

Formulation

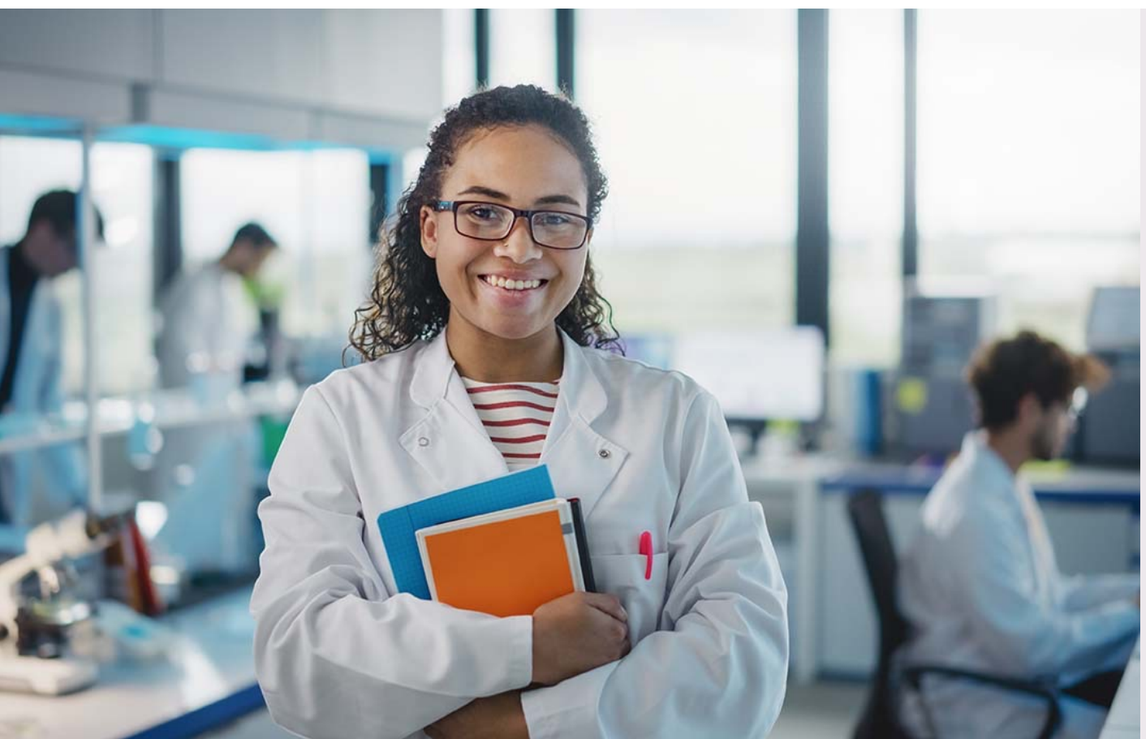
Buffer: Available in Tris 50mM, pH 7.5. Other buffers or customized formulation can be provided upon request.

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.



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