

PGN-ECndss Ultrapure

Soluble sonicated peptidoglycan from *Escherichia coli* K12; NOD1/2 ligand

Catalog code: tlr1-kssp gn

<https://www.invivogen.com/png-ecndss>

For research use only

Version 19G19-MM

PRODUCT INFORMATION

Contents

- 1 ml of soluble sonicated peptidoglycan from *Escherichia coli* K12 (PGN-ECndss) provided as a solution at 1 mg/ml
- 1.5 ml sterile endotoxin-free water (for serial dilutions)

Storage and stability

- PGN-ECndss is provided as a solution (1 mg/ml) and shipped at room temperature.
- Store PGN-ECndss can be stored at room temperature for 2 weeks and at 4°C for up to 6 months.

Note: When stored at 4°C, PGN-ECndss may precipitate. Place the product in a water bath at 37°C for a 5 minutes and homogenize for complete solubilization.

Warning: Do not freeze. PGN-ECndss will not return to solubility.

DESCRIPTION

Gram-positive peptidoglycan (PGN) is usually bound to other polymers such as teichoic acids and carbohydrates, while Gram-negative PGN is commonly attached covalently to a single type of lipoprotein. According to Travassos *et al.*, the presence of these polymers in most preparations of PGNs is responsible for the TLR2-dependent activity of PGN¹. PGNs purified by detergent lysis and hydrolysis under basic conditions to eliminate lipophilic constituents lose their ability to activate TLR2-transfected HEK293 cells but still activate NOD2-transfected cells. Insoluble PGN from *E. coli* also activates NOD1-transfected cells.

Soluble PGN from *E. coli* K12 is obtained after sonication of insoluble PGNs. At the working concentrations, it activates HEK293 cells transfected with either NOD1 or NOD2 but not cells transfected with TLR2 or TLR4.

1. Travassos L.H. *et al.*, 2004. Toll-like receptor 2-dependent bacterial sensing does not occur via peptidoglycan recognition. EMBO Rep. 5(10):1000-1006.

METHODS

NOD1/NOD2 activation using PGN-ECndss

PGN-ECndss can be used to activate NOD1 or NOD2 in cells expressing these receptors, such as HEK-Blue™ NOD1 and HEK-Blue™ NOD2 cells. These cells express the human or mouse NOD1 or NOD2 genes and an NF-κB inducible SEAP reporter gene. Levels of SEAP can be easily determined using HEK-Blue™ Detection, a cell culture medium that allows the detection of SEAP as it is secreted by the cells.

For more information visit: <https://www.invivogen.com/nod-cell-lines>.

- Add 20 µl of PGN-ECndss at various concentrations (1-5 µg/ml final concentration) per well of a 96-well plate.
- Prepare a cell suspension (~280,000 cells per ml) in HEK-Blue™ Detection medium and immediately add 180 µl of the cell suspension (~50,000 cells) to each PGN-ECndss-containing well.
- Incubate the plate for 6-24 h at 37 °C, 5% CO₂.
- Determine SEAP levels using a spectrophotometer at 620-655 nm.

RELATED PRODUCTS

Product	Description	Cat. Code
HEK-Blue™ hNOD1 Cells	hNOD1 reporter cells	hkb-hnod1
HEK-Blue™ hNOD2 Cells	hNOD2 reporter cells	hkb-hnod2
HEK-Blue™ mNOD1 Cells	mNOD1 reporter cells	hkb-mnod1
HEK-Blue™ mNOD2 Cells	mNOD2 reporter cells	hkb-mnod2
M-TriDAP	NOD1/NOD2 ligand	tlr1-mtd
PGN-ECndi Ultrapure	NOD1/NOD2 ligand	tlr1-kipgn
PGN-SAndi Ultrapure	NOD1/NOD2 ligand	tlr1-sipgn

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