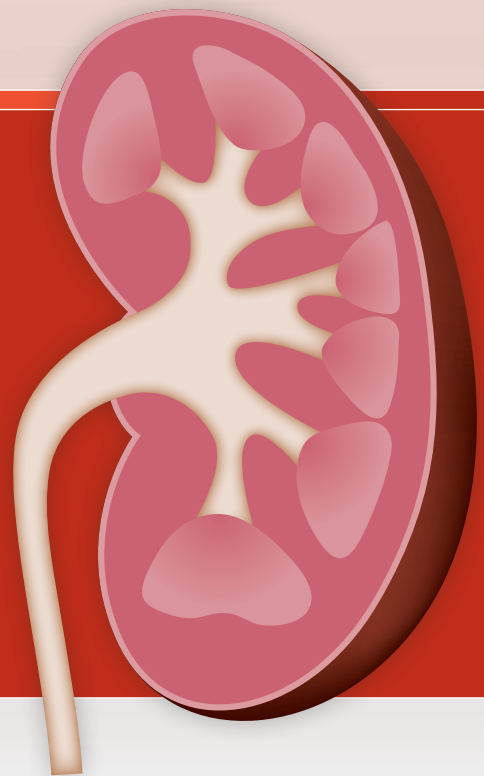


NGAL Rapid ELISA Kit (KIT 037)

For human urine, plasma or serum

Early diagnosis of acute renal failure in

- Cardiac surgery
- Nephrotoxicity
- Kidney transplants



BIOPORTO[®]
Diagnostics



NGAL – an early marker of kidney injury

NGAL (neutrophil gelatinase-associated lipocalin, also known as lipocalin-2) is a small protein found not only in neutrophils but also in certain epithelia, such as renal tubules, where its expression is dramatically increased in ischemic or nephrotoxic injury. NGAL levels rise in urine and blood within 2 hours of renal injury. This makes NGAL an early, sensitive and non-invasive biomarker for acute renal injury.

Clinical significance

NGAL levels above those normally seen in infections indicate acute renal injury which may lead to acute renal failure. NGAL determination is relevant in connection with:

- Cardiovascular surgery ^{1,2}
- Critically ill patients ³
- Septic ³ or hemorrhagic shock
- Kidney transplants ^{4,5}
- Use of i.v. X-ray contrast agents ⁶
- Use of nephrotoxic therapeutic agents ^{7,8,9}

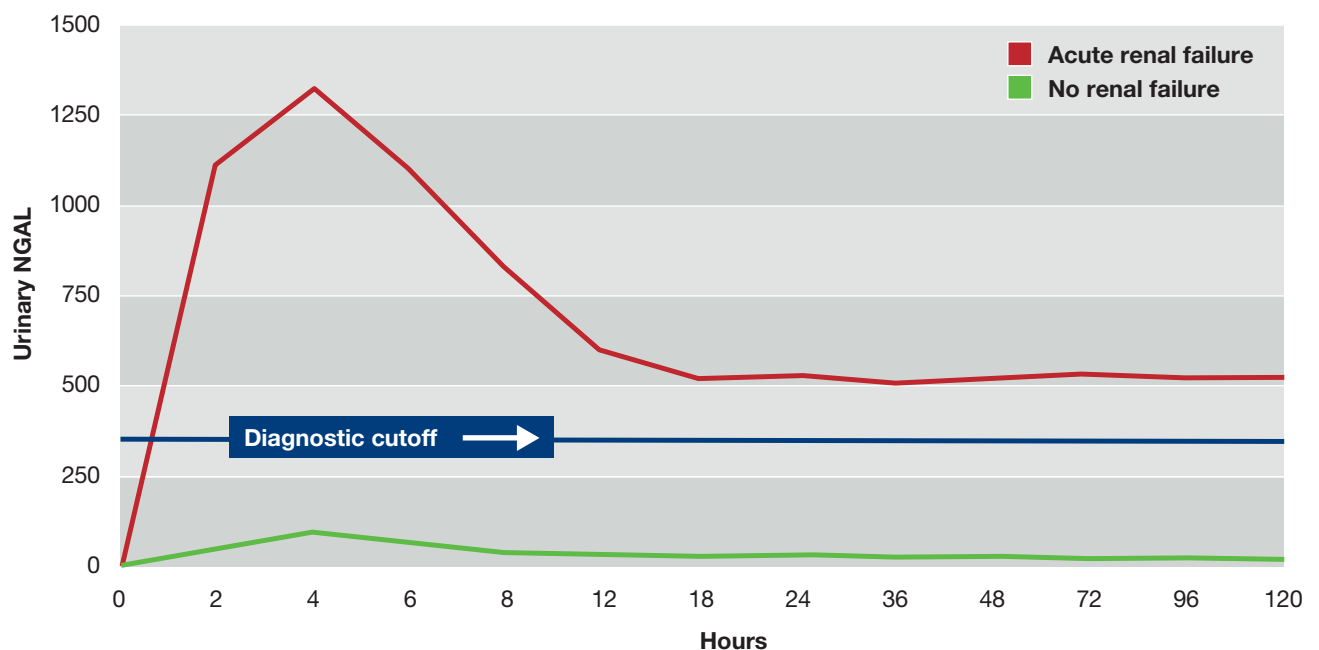
Up to 50% of patients in intensive care may suffer some degree of acute renal failure. The onset of acute renal failure on top of other critical illness increases mortality dramatically.

The prognosis of acute renal failure has not improved significantly over the last four decades. Current diagnostic methods such as serum creatinine or cystatin C measurements only respond after renal function has deteriorated, which may only become

apparent one or more days after the original insult. With the NGAL Rapid ELISA Kit, physicians can initiate appropriate management of acute renal failure within hours rather than days of the insult.

Studies by BioPorto Diagnostics ¹⁰ have shown that the mean NGAL concentration in urine from healthy donors was 5.3 ng/mL (range 0.7-9.6 ng/mL). The mean NGAL concentration in plasma from healthy donors was 63 ng/mL (range 37-106 ng/mL). NGAL levels rise steeply immediately after renal injury. In unselected patients admitted to intensive care, the NGAL concentrations in urine ranged from 110 ng/mL to 40,000 ng/mL, while the mean NGAL concentration in EDTA plasma ranged from 25 ng/mL to 3491 ng/mL. Urinary levels above a cut-off of 350 ng/mL or plasma levels above 400 ng/mL are associated with acute renal failure with an approximate 90% positive predictive value.

Illustrative time-course of urinary NGAL concentration after a moderate renal insult.



Kit features

With the NGAL Rapid ELISA Kit urine, plasma or serum samples can be analyzed in less than 1 hour in a standard laboratory with conventional ELISA equipment. All components are stored at 4°C and incubations performed at room temperature. The kit contains ready-to-use calibrators, reagents and pre-coated well strips, which greatly reduces the hands-on time. The simple test protocol combines high reproducibility with rapid analysis.

- 1-hour rapid assay format
- CE IVD marked
- Measures NGAL in both urine, plasma and serum
- Highly reproducible and easy to use
 - Ready-to-use calibrators and working solutions
 - Pre-coated ELISA wells
 - All incubations performed at room temperature
 - All components are stored at 4°C
- Requires only standard ELISA equipment

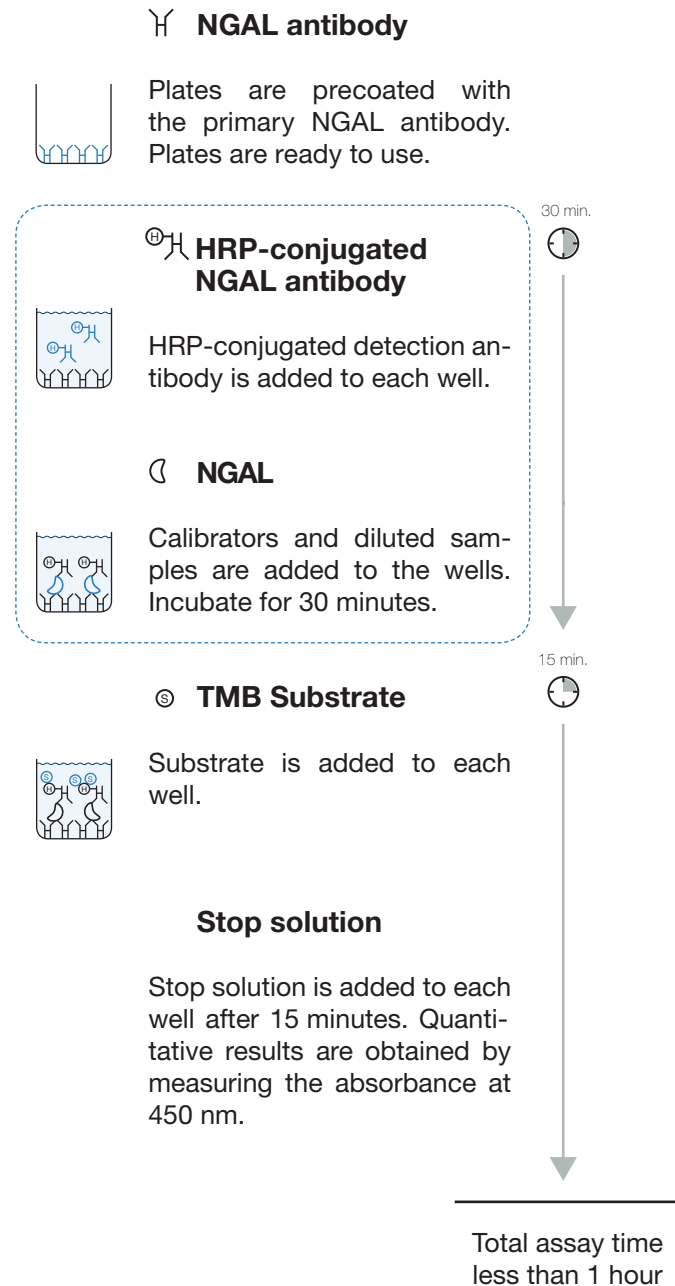
Kit components

Item	Contents	Quantity
①	12 x 8 coated Microwells + Frame	96 wells
②	5x Sample Diluent Concentrate	1 x 60 mL
③a-③f	NGAL Rapid Calibrator 1-6 The exact concentration of each calibrator is printed on the label of the vials and on the QC-certificate.	6 x 1 mL
④	25x Wash Solution Concentrate	1 x 30 mL
⑤	HRP-conjugated NGAL Antibody	1 x 6mL
⑥	TMB Substrate	1 x 12 mL
⑦	Stop Solution	1 x 16 mL
⑧	Polypropylene U-Microwell Plate	96 wells

Ordering information

Cat. No.	Product name
KIT 037	NGAL Rapid ELISA Kit 

Assay Procedure



Related products

Cat. No.	Product name
KIT 036	NGAL ELISA Kit
HYB 211-01	Mouse monoclonal anti-human NGAL antibody
HYB 211-01B	Biotinylated monoclonal anti-human NGAL antibody
HYB 211-02	Mouse monoclonal anti-human NGAL antibody
HYB 211-02B	Biotinylated monoclonal anti-human NGAL antibody
HYB 211-05	Mouse monoclonal anti-human NGAL antibody
ABS 039-08	Mouse monoclonal anti-rat NGAL antibody
ABS 039-32	Mouse monoclonal anti-rat NGAL antibody
ABS 039-32B	Biotinylated mouse monoclonal anti-rat NGAL antibody

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