

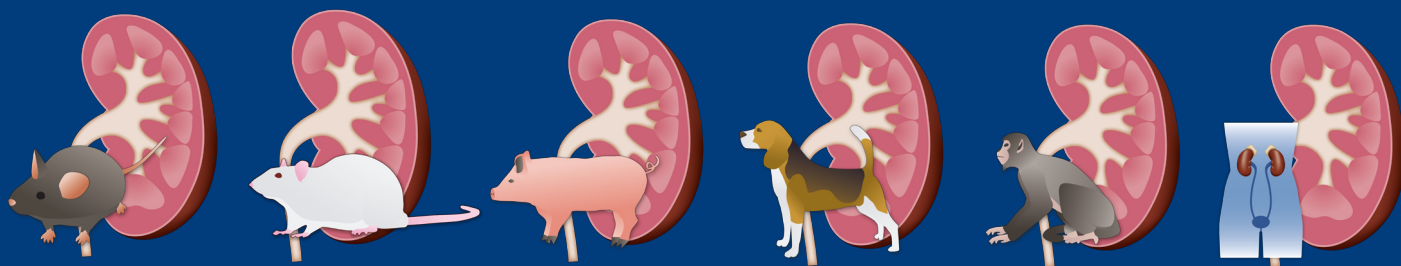
NGAL

the biomarker in renal toxicology

NGAL (neutrophil gelatinase-associated lipocalin, lipocalin-2) is a small protein expressed in neutrophils and certain epithelia, including the renal tubules. In humans, renal expression of NGAL is dramatically increased after kidney injury, and NGAL is released into both urine and plasma. Evidence is rapidly accumulating to show that NGAL also rises in animals after kidney injury.

The wide applications of NGAL measurement include:

Basic research | Drug development | Medical research



BIOPORTO[®]
Diagnostics

www.ngal.com

NGAL is the first kidney injury or toxicity biomarker that can be measured in all the standard animal models of basic research, medical research and drug development. In recent years NGAL has been shown to be perhaps the earliest biomarker to respond to acute kidney injury in humans. After such injury, NGAL levels rise quickly and markedly in both urine and blood, showing a wide response range in comparison with other proposed biomarkers of kidney injury.

NGAL in drug development

BioPorto's animal NGAL ELISA kits can be used in preclinical studies to detect rises in NGAL concentrations in urine and blood and hence the extent of renal injury, including nephrotoxic injury. The applications of BioPorto's animal NGAL ELISA kits in drug development range from drug discovery to preclinical toxicity testing. BioPorto also offers human NGAL ELISA kits which can be used in clinical studies, e.g. to detect nephrotoxicity in the relevant phases of clinical trials.

Important applications of NGAL measurement for the pharmaceutical industry are as a:

- **Safety** biomarker - NGAL levels rise when the kidney is injured
- **Efficacy** biomarker - NGAL levels fall when kidney damage is treated



Basic and medical research

NGAL undergoes an early and dramatic up-regulation in renal tubular cells after kidney injury from a variety of causes. Rises of NGAL concentrations in urine, plasma or serum can be used in basic research, medical research and preclinical studies to detect the extent of kidney injury. NGAL determination could also be used to detect kidney injury or disease in pets and farm animals.

NGAL ELISA kits

Cat. No.	Product name
KIT 036	NGAL ELISA Kit, up to 40 samples in duplicate
KIT 037	NGAL Rapid ELISA Kit, up to 42 samples in duplicate
KIT 042	Mouse NGAL ELISA Kit, up to 40 samples in duplicate
KIT 043	Dog NGAL ELISA Kit, up to 40 samples in duplicate
KIT 044	Pig NGAL ELISA Kit, up to 41 samples in duplicate
KIT 045	Monkey NGAL ELISA Kit, in development
KIT 046	Rat NGAL ELISA Kit, up to 40 samples in duplicate

Monoclonal antibodies to animal and human NGAL

To supplement our animal and human NGAL ELISA kits, we also offer a range of monoclonal antibodies to NGAL from the animal species that are most used by researchers and the pharmaceutical industry:

mouse | rat | dog | pig | monkey | human

For more information, please contact BioPorto Diagnostics or your local BioPorto Diagnostics distributor



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