

BIOMÉRIEUX

# TTV R-GENE®

REAL TIME PCR ASSAY - ARGENE® BIOMARKER

GUIDING TRANSPLANT RISK MANAGEMENT



PIONEERING DIAGNOSTICS

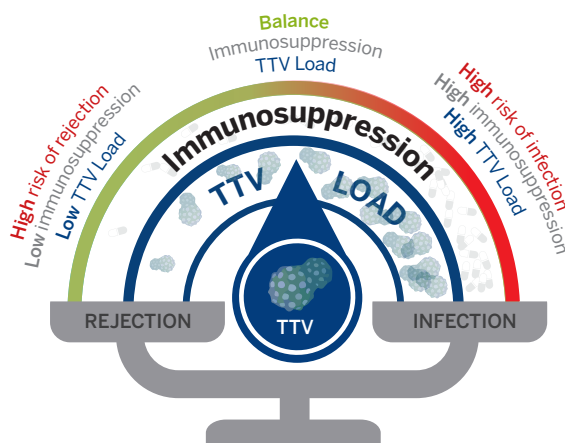
# TTV R-GENE®

## Towards tailored transplant patient management

Graft success after transplant surgery requires a **fine balance** of the immunosuppression to **prevent rejection but also opportunistic infections**<sup>1,2</sup>. TTV R-GENE®, a complete ready-to-use TTV detection and quantification kit, is a **promising innovation** for transplant patient management.

The Torque Teno virus (TTV) is a non-pathogenic virus carried by nearly everyone and interestingly, research has demonstrated TTV peripheral blood copy number is associated with the grade of the immunosuppression of the host<sup>1,3,4</sup>. TTV viral load, for example, has been demonstrated as being predictive for the development of infection in kidney transplant recipients<sup>2,3,5</sup> and has also been associated with the prediction of organ rejection<sup>1,2,3</sup>. **TTV viral load could be used to tailor therapy for transplant patients to achieve the individual balance for optimal immunosuppression**<sup>2,3,6</sup>.

The TTV GUIDE TX project, funded by the European Union's Horizon 2020 research & innovation programme under grant agreement 896932, aims to demonstrate the safety and preliminary efficacy of TTV-guided dosing of immunosuppressive drugs in kidney transplant recipients. More info: <https://www.ttv-guide.eu/>



Original illustration by Joris, I Rotmans and Manon Zuurmond, Department of Internal Medicine, LUMC, Leiden. Used with permission.

### KEY FEATURES

- Real-time detection and quantification of all human TTV species
- Complete kit with ready-to-use reagents
- Validated on EMAG® and other extraction systems
- Validated on major real-time PCR platforms
- IVDR CE Marked
- Same procedure as the ARGENE® Transplant range

TECHNICAL INFORMATION	TTV R-GENE® - REF : 423414
Kit content: 90 tests	All included: amplification premix, internal control (IC2), 4 quantification standards (QS), sensitivity control (SC), negative control
Specimens validated	Whole blood, plasma
Extraction platforms	EMAG®, NUCLISENS® easyMAG®, MagNA Pure 96, QIASymphony SP
PCR design	5'-UTR regions (untranslated region)
Amplification platforms	ABI 7500 Fast, ABI 7500 Fast Dx, LightCycler 480 (System II), Rotor-Gene Q, QuantStudio 5, QuantStudio 5 Dx, CFX96, CFX Opus 96
Range of quantification	250 to 1.0E+09 copies/mL
Storage	-15°C / -31°C
Regulatory status	For <i>in vitro</i> Diagnostic Use (IVDR CE marked under the EU regulation 2017/746)

### REFERENCES

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2. Kuczaj A *et al.* Torque Teno Virus (TTV)-A Potential Marker of Immuno-competence in Solid Organ Recipients. *Viruses.* (2023)
3. van Rijn AL *et al.* Torque teno virus load as marker of rejection and infection in solid organ transplantation - A systematic review and meta-analysis. *Rev Med Virol.* (2023)
4. De Vlamincck, I. *et al.* Temporal Response of the Human Virome to Immunosuppression and Antiviral Therapy. *Cell* 155, 1178–1187 (2013)
5. Doberer K, *et al.* Torque teno virus for risk stratification of graft rejection and infection in kidney transplant recipients- *Am J Transplant*;20(8):2081-2090 (2020)
6. Reyes NS *et al.* Prospective cohort study of Torque Teno Virus (TTV) viral load kinetics and the association with graft rejection in renal transplant patients. *J Clin Virol.* (2023)