

Human Herpes Virus-6

Panel composition

This EQA panel for the detection of Human Herpes Virus 6 (HHV-6) consisted of 8 samples containing various concentrations and strains of HHV-6, 1 CMV positive sample and 1 negative sample, in Transport Medium (TM) or plasma.

Material and methods

The QCMD panel was prepared using NucliSENS® easyMAG® (bioMérieux) for sample extraction with the Specific B protocol (200/50).

Subsequently, the extracted samples were analysed by real-time PCR using **CMV HHV6,7,8 R-gene®** (bioMérieux - ref.: 69-100B) on ABI 7500 Fast (Applied Biosystems).

Results and discussion

Panel code	QCMD Results				CMV HHV6,7,8 R-gene® HHV6 (R6) Premix Results	
	Sample Content	Sample Type*	Copies/mL	Log ₁₀ Copies/mL	Log ₁₀ Copies/mL	Delta Log ₁₀ Copies/mL
HHV6DNA14-01	HHV-6 Type B (TM)	Core	1,002	3.00	3.00	0.00
HHV6DNA14-02	HHV-6 Type A (TM)	Core	596	2.78	3.37	0.59
HHV6DNA14-03	HHV-6 Type A (TM)	Core	3,020	3.48	3.37	-0.11
HHV6DNA14-04	HHV-6 Type A (TM)	Educational	171	2.23	2.47	0.24
HHV6DNA14-05	HHV-6 Type B (TM)	Core	10,000	4.00	4.05	0.05
HHV6DNA14-06	HHV-6 Type B (TM)	Educational	294	2.47	2.14	-0.33
HHV6DNA14-07	CMV (TM)	Core	Negative	NA	Negative	NA
HHV6DNA14-08	HHV-6 Negative (Plasma)	Core	Negative	NA	Negative	NA
HHV6DNA14-09	HHV-6 Type B (Plasma)	Core	843	2.93	2.94	0.01
HHV6DNA14-10	HHV-6 Type B (Plasma)	Core	8,954	3.95	3.91	-0.04

*«The QCMD EQA panels contain a range of samples, designed to look at different aspects of assay performance. Panel members are designated 'core proficiency samples' on the basis of scientific information, clinical relevance and clinical experience (...). Laboratories are expected to correctly analyse and report the core proficiency samples in order to show acceptable proficiency.» QCMD 2014 general announcement
Consequently, the educational samples are considered as challenging due to very low concentrations. They are clearly detection limits.

- All 6 Core HHV-6-positive samples from HHV6 DNA EQA 2014 QCMD Panel are detected with HHV6 (R6) premix of CMV HHV6,7,8 R-gene® kit.
- The 2 Core HHV-6-negative samples are undetected as expected with CMV HHV6,7,8 R-gene®.
- The 2 Educational (i.e. challenging samples), containing low viral loads of 171 copies/mL (HHV6DNA14-04) and 294 copies/mL (HHV6DNA14-06) are detected with CMV HHV6,7,8 R-gene®.
- The delta log observed between QCMD and Argene quantification results (ranging from -0.00 to 0.59 Log₁₀ copies/mL) are always below 0.5 log₁₀, showing the excellent correlation between both quantifications.
- The results show the good sensitivity and specificity of the CMV HHV6,7,8 R-gene® (ref.: 69-100B)