HHV-6 TESTING ALTERNATIVES – Available in US diagnostic labs

Assay	Advantages	Disadvantages
COMMERCIAL ASSAYS		
Conventional IFA IgG and IgM *Plasma or serum*	*Very sensitive *Semi-quantitative with titration *High titers of IgG can suggest (but not prove) active infection *IgM demonstrates recent primary infection or acute reactivation *Allows monitoring over time	*Does not discriminate between A and B variants *Requires serial samples to demonstrate rise or drop titers *Some cross-reactivity with HHV-7 *Labor intensive *IgM is not useful for chronic infections *
ELISA IgG and IgM *Plasma or serum*	*Very sensitive *Automated * Less expensive than IFA *No training required to read results *IgM demonstrates recent primary infection or acute reactivation *Consistent results	*Does not discriminate between A and B variants * Some cross-reactivity with HHV-7 *Results are index of optical density read-out *Can't compare index values over time to monitor treatment
Quantitative Real-time PCR *Plasma or serum*	*Can determine active infection *Discriminates variant type (A vs. B) *Quantitative results can be compared over time	*Poor predictive value due to low virus copy numbers in plasma or CSF *Expensive equipment required
Nested PCR *Plasma or serum*	*More sensitive than conventional PCR	*Prone to false positives *Poor predictive value due to low virus copy numbers in plasma *Time consuming; not practical for commercial laboratories.
Real-time PCR *Whole blood*	*Useful for determining variant	*Cannot differentiate active from latent infection since this test will pick up latent virus. *Costly equipment required
Nested PCR *Whole blood*	* Useful for determining variant	*Cannot differentiate active from latent infection since this test will pick up latent virus.
Rapid Culture (with mitogenic stimulation) *Whole blood* PBMC's	* Useful for determining variant * Indicates active infection is *possible*	*High rate of false positives since latent virus is reactivated in culture.