Changi General Hospital
SingHealth

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Changi General Hospital
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Singapore 529889
www.cgh.com.sg
Reg No 198904226R

Test Name	**Herpes Simplex Virus & Varicella Zoster Virus Multiplex PCR**
Specimen Type	**1. CSF specimens** At least 0.5 mL of undiluted sample in a sterile and leak-proof screw-capped container without any additives. **2. Swabs** Use flocked swabs eluted in UTM (universal transport media). For vesicular lesions, gently de-roof the vesicle with a sterile needle. Use the swab to collect vesicular fluid AND the base of lesion, because the virus is usually present in cellular material. For crusted lesions, gently remove the crusts of lesions and sample fluid, pus or cellular material from the base of the lesion. Swabs of oral or genital sites / ulcers are also acceptable. **3. EDTA blood sample (2 tubes)**
Special Instructions For Laboratory	-
Specimen Storage And Transport	Refrigerate sample until transfer to laboratory. Do not freeze. Send sample at 2 – 8°C (with an ice-pack). Sample must reach the laboratory within 24 hours after collection.
Specimen Minimum Volume	-
Test Method	In-house real-time PCR
Expected Result	-
Reference Ranges	Refer to Lab report
Turn Around Time	1-3 days, 24 hrs for CSF samples
Days Of Testing	Monday - Saturday
Hospital	CGH
Laboratory	Microbiology Lab
Discipline	Molecular
Contact Details	68504935

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Clinical Information	**CSF specimens** HSV-1 is generally the most common virus detected in CSF, followed by VZV and HSV-2. Encephalitis was the most common diagnosis in patients with HSV-1 detected in the CSF, whereas meningitis was a more common clinical diagnosis in patients with HSV-2 or VZV detected [1]. **Dermatological diagnosis** A single study using multiplex PCR analysis showed that at the initial clinical presentation, herpes simplex is generally not mistaken for zoster but that zoster may be incorrectly diagnosed as herpes simplex [2]. **Disseminated herpes simplex or visceral herpes** Disseminated disease with fulminant hepatitis is a rare complication of HSV infection. Both HSV-1 and HSV-2 have been implicated. Typical oral and/or genital lesions occur in only 30 percent of patients. Due to the lack of specific findings associated with HSV hepatitis, HSV should be on the differential of all cases of idiopathic fulminant hepatitis, especially during pregnancy. Qualitative detection of HSV in blood may assist in the diagnosis of disseminated infection [3]. **Visceral varicella-zoster infection** Visceral organ involvement may present as a fulminant and rapidly evolving syndrome with pneumonia, hepatitis, or encephalitis and may occasionally develop in the absence of rash. Qualitative detection of VZV in blood may assist in the diagnosis of disseminated infection or visceral disease [4]. [1] Journal of Clinical Microbiology 2002, 40(5): 1728-1732 [2] British Journal of Dermatology 1997, 137(2): 259-261 [3] The Journal of Pediatrics 2012;161(2):357-61 [4] The Lancet 2001: 357(9274): 2101-2102
Link Out For Additional Information	-
Remarks	ASSAY PERFORMANCE This assay was validated in 107 samples against reference test results with the following performance characteristics:

	Sensitivity	Specificity	Limit of detection (LOD) Swabs (UTM)	Blood (EDTA)
Herpes Simplex Virus 1	100%	100%	600 copies/ml	1650 copies/ml
Herpes Simplex Virus 2	100%	98.6%	900 copies/ml	3300 copies/ml
Varicella-Zoster Virus	100%	100%	150 copies/ml	n/a