

NEW HERPES SIMPLEX VIRUS CULTURE

Creighton Medical Laboratories is pleased to begin offering a rapid culture method for the detection of Herpes simplex virus (HSV). Final results for this method will be available approximately 24 hours after specimen processing. All specimen collection and transport requirements remain the same. The charge may increase slightly depending on whether or not the culture is positive.

The previous method utilized standard tube cell culture which was observed daily for the development of cytopathic effects (CPE) typical of HSV. If typical CPE was observed the cells were removed from the tube and stained with a fluorescent antibody specific for HSV type 1 and HSV type 2. The positive culture was then reported with the specific HSV type isolated. The usual turnaround time for a positive culture was 2 – 3 days, with a negative culture being held and reported at day 7.

The new method involves the use of a genetically engineered cell culture system, whose cells are induced to produce an enzyme (β -galactosidase) when they are infected with HSV-1 or HSV-2. After overnight incubation with the specimen, the chromogenic substrate solution is added to the cells which are then examined microscopically. Blue colored cells indicate the production of β -galactosidase and thus the presence of HSV. The substrate solution also contains a fluorescent antibody to HSV-2 and a non-fluorescent mouse IgG antibody to HSV-1. If blue cells are detected indicating the presence of HSV, the cells are then observed microscopically using fluorescence illumination. If fluorescent cells are observed, the isolate is HSV-2. If no fluorescent cells are observed, a second reagent is added containing fluorescent goat anti-mouse IgG. Again the cells are observed microscopically using fluorescence illumination. If fluorescent cells are now observed, the isolate is HSV-1. Since different reagents and procedures are performed on the culture depending on whether HSV is present and, if so, what type it is, the patient bill charge will vary accordingly.

Effective Date: March 12, 2007

Specimen and Transport requirements: Lesion swab in viral transport media; 4°C

Test Order: HSV Culture

Availability: Final results available within 1 working day of specimen receipt and processing (specimens must be received in Virology by noon Monday through Friday, 8AM on Saturday, to be processed that day).

Please forward this to appropriate staff members within your facility. If you have any questions, please contact CML at (402) 280-4382.

Creighton Medical Laboratories is proud to be your partner in providing effective and timely health care.

