

A-12 Monoclonal antibodies against Herpes Simplex Virus-2 (HSV-2) and in typing of HSV isolates

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Typing of Herpes Simplex Virus (HSV) isolates into type 1 and type 2 from genital, oral and conjunctival lesions is important as susceptibility to antiviral agents is different in the 2 types. This study was undertaken to produce monoclonal antibodies (MAbs) against HSV-2 and to type viral isolates by immunofluorescence test using these MAbs. MAbs were produced by the hybridoma technology described by Anou and Chiba and by Havlow and Lane with a suitable modification.

In this study 3 MAbs were produced against the HSV-2 (UW-268) strain and one HSV-2 specific, IgG antibody designated as 24G5 obtained. The other 2 IgM antibodies, 46B2 and C324B4 showed cross reactions with HSV-1 by Indirect Immunofluorescence (IIF) test.

The specificity of MAbs was tested against 55 HSA isolates. A Direct Immunofluorescence antibody (DIFA) test using a commercially available MAb kit against HSV-1 and HSV-2 and an IIF test using prepared MAbs were carried out. Out of 55, 40 (73%) were typed as HSV-2 and 15 (27%) HSV-1 by DIFA. C324B4 and 46B2 MAbs reacted with both type 1 and type 2 isolates showing

that these were cross reactive. The 24G5 antibody reacted only with the 40 type 2 isolates showing that this antibody was specific for HSV type 2.

24G5 MAb possessed sufficient specificity to type isolates of HSV-2. Although the C324B4 and 46B2 MAbs showed cross reactivity these 2 can be used to detect HSV infected cells in direct smears and also for early detection of HSV in specimen cultures. These MAbs will have an important role to play in the early diagnosis and typing of HSV infection in Sri Lanka.