**BACKGROUND**

Merkel cells are round neuroendocrine cells found in skin that have synaptic contacts with somatosensory afferents. Responsible for touch and pressure sensation, Merkel cells can turn malignant and form a rare but aggressive form of skin cancer known as Merkel cell carcinoma (MCC). Approximately 80% of MCC are caused by a newly-described polyomavirus called Merkel cell polyomavirus, also known as MCPyV or MCV, that expresses a large T antigen in tumor cells. Full-length MCPyV large T antigen is a 125 kDa nuclear protein but MCPyV T antigens obtained from tumors have natural truncating mutations resulting in variably-sized, smaller proteins. MCPyV large T-antigen (CM2B4) was raised against a peptide in exon 2 of the T antigen locus and is highly specific for MCPyV large T and 57kT isoforms but will not detect MCPyV small T antigen. While human MCPyV infection is widespread, MCPyV large T antigen is a specific marker for Merkel cell tumors.

**REFERENCES**


**SOURCE**

MCPyV large T-antigen (CM2B4) is a mouse monoclonal antibody raised against large T/57kT exon 2 peptides of Merkel cell polyomavirus.

**PRODUCT**

Each vial contains 200 µg IgG2b, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MCPyV large T-antigen (CM2B4) is available conjugated to agarose (sc-136172 AC), Alexa Fluor® 488 (sc-136172 AF488), Alexa Fluor® 546 (sc-136172 AF546), Alexa Fluor® 594 (sc-136172 AF594) or Alexa Fluor® 647 (sc-136172 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; to HRP (sc-136172 HRP), Alexa Fluor® 488 (sc-136172 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP; to HRP; to HRP.

**APPLICATIONS**

MCPyV large T-antigen (CM2B4) is recommended for detection of Merkel Cell Polyomavirus large T antigen of Merkel cell polyomavirus origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of MCPyV large T-antigen wild-type/full length: 125 kDa.

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**STORAGE**

Store at 4°C, **“DO NOT FREEZE”**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

MCPyV large T-antigen (CM2B4): sc-136172. Western blot analysis of MCPyV large T-antigen expression in non-transfected A431 and JB6(206) encoding wild type full length genomic T antigen transfected (B2:293T whole cell lysates. Kindly provided by Patrick S. Moore, MD, University of Pittsburgh Cancer Institute.

MCPyV large T-antigen (CM2B4): sc-136172. Immunofluorescence staining of formaldehyde-fixed UISO cells retrovirally transduced to express MCPyV T antigen. The T antigen shows diffuse nuclear localization. Kindly provided by Patrick S. Moore, MD and Masako Shuda, PhD, University of Pittsburgh Cancer Institute.

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

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