MCPyV large T-antigen (CM2B4): sc-136172

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.

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.

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 IgGκ 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), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136172 HRP), 200 µg/ml, for WB, IHCP(I) and ELISA; to either phycoerythrin (sc-136172 PE), fluorescein (sc-136172 FITC), 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, IHCP(I) and FCM; and to either Alexa Fluor® 680 (sc-136172 AF680) or Alexa Fluor® 790 (sc-136172 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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SELECT PRODUCT CITATIONS


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 (A) and IL26 encoding wild type full length genomic T antigen transfected (B) 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 USO cells retrovirally transduced to express MCPyV T antigen. The T antigen shows diffuse nuclear localization. Kindly provided by Patrick S. Moore, MD and Masa Shuda, PhD, University of Pittsburgh Cancer Institute.