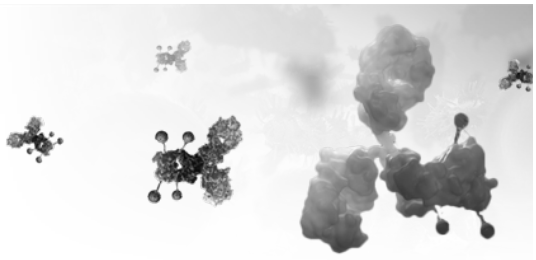

Mouse Anti-Vaccinia virus (VACV/VV/small pox) A33R protein Monoclonal Antibody, clone UW57 (CABT-NS2311-2)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	Antibodies are reactive with the Lister & MVA strains of Vaccinia and Monkeypox virus or infected cells. Does not crossreact with Parainfluenza (1-3), RSV, Adeno, Influenza A&B or HSV1 or with uninfected cells. Reactive with free virus + infected cells. Specific to the A33R protein. Functions in ELISA and IFA.
Target	VACV A33R protein
Isotype	IgG
Source/Host	Mouse
Species Reactivity	Vaccinia virus
Clone	UW57
Conjugate	unconjugated
Applications	ELISA, WB, IHC ELISA/Western 1:1000-:1:5000 IHC: 1:500-1:2000
Size	0.5 ml
Buffer	PBS, pH 7.4, 0.1% BSA and and 0.01% azide
Preservative	0.01% azide
Storage	Store at 0-4°C for not more than 2 weeks. Store at -20°C or -80°C for long term storage.

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221

BACKGROUND

Introduction

Vaccinia virus (VACV or VV) is a large, complex, enveloped virus belonging to the poxvirus family. Viral particles (virions) are generally enveloped (external enveloped virion- EEV), though the intracellular mature virion (IMV) form of the virus, which contains different envelope, is also infectious. They vary in their shape depending upon the species but are generally shaped like a brick or as an oval form similar to a rounded brick. The virion is exceptionally large, its size is around 200 nm in diameter and carries its genome in a single, linear, dsDNA, which encodes for approximately 250 genes.

Vaccinia virus was used for smallpox vaccination via inoculation into the superficial layers of the skin of the upper arm. However, with the eradication of smallpox, routine vaccination with Vaccinia virus has ceased. Recent interest in vaccinia has focused on its possible usage as a vector for immunization against other viruses. Currently, the vaccine is only administered to health care workers or research personnel who have a high risk of contracting the Variola virus, and to the military personnel of the United States of America. Due to the present threat of smallpox-related bioterrorism, there is a possibility the vaccine may have to be widely administered again in the future. Lister (also known as Elstree): the English vaccine strain used by Leslie Collier for vaccine production during the World Health Organization Smallpox Eradication Campaign (SEC). Modified vaccinia Ankara (also known as MVA): a highly attenuated strain created by passaging vaccinia virus several hundred times in chicken embryo fibroblasts. Unlike some other vaccinia strains it may be safer to use in humans who have weaker immune systems due to being very young, very old, having HIV/AIDS, etc. Six proteins, encoded by the F13L, B5R, A33R, A34R, A36R, and A56R open reading frames (ORFs), have been identified as constituents of the IEV or EEV membrane. A33 is a type-II integral membrane glycoprotein, forming a disulfide-bonded homodimer modified with N- and O- linked glycosylations and acylation and found on the surface of extracellular virions (EV) and infected cells. Using A33-based protein or DNA vaccines, several studies demonstrated the contribution of A33 to protection against VACV, ECTV and MXPV. A33R is 185aa (protein accession #P68617).

The vaccinia virus (VV) A27L gene encodes a 14 kDa protein that is required for the formation of intracellular enveloped virus (IEV) and, consequently, normal sized plaques. A27L protein is 110-aa (protein accession # AAN78218.2).

B5R, a 561-aa membrane protein containing ankyrin repeats that mediate protein-protein interactions and is related to the regulators of complement activation (RCA) superfamily. Its transmembrane domain is the major determinant for targeting the B5R protein to the outer membrane of EEV (extracellular enveloped virus) and for supporting EEV formation, thus playing an important role in the process of virus envelopment and release. B5R is essential for efficient wrapping of IMV, actin tail formation, normal plaque size, virus virulence, incorporation of the protein into EEV and for EEV formation.

Keywords

VACA;VV;Vaccinia virus;Vaccinia virus protein J5;VACA J5;VACA protein J5;VV J5;VV protein J5;Variola J5;Variola;Vaccinia virus Protein J5;Poxviridae;Orthopoxvirus;Myristoylated protein G9;Poxvirus myristoylprotein;Temporal expression late;Vaccinia virus G9R;VACA G9R

45-1 Ramsey Road, Shirley, NY 11967, USA
Email: info@creative-diagnostics.com
Tel: 1-631-624-4882 Fax: 1-631-938-8221