

Recombinant Vaccinia Virus B18R Protein, His-tagged

Cat. No. VAC-608 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

This Vaccinia virus B18R protein is derived from B18R gene of the Western reserve strain (Accession # P25213) expressing His20- Glu351, and is fused with a polyhistidine tag at the C-terminus. The total calculated MW is 40.3 kDa. The Vaccinia virus B18R protein is expressed in HEK293 cells, and reduced protein migrates as a band of 50-60 kDa.

Tag

His

Background

Vaccinia virus B18R is a type I interferon (IFN)-binding protein and it is encoded by the vaccinia virus B18R open reading frame in the WR (Western Reserve) strain of vaccinia virus, which contains two Ig-like C2-type domains and one Ig-like V-type domain. Vaccinia virus B18R exists in a soluble and a membrane-bound form. As a type I IFN receptor, B18R counteracts the antiviral effects of host IFN-alpha/beta. Also, B18R acts as a soluble IFN-alpha receptor and thus inhibits the interaction between host IFN-alpha and its receptor. B18R was recently identified to enable increased cell viability during RNA transfection protocols designed to convert human somatic donor cells into iPSCs via direct delivery of modified synthetic mRNAs for OCT4, SOX2, KLF4 and MYC (OSKM) and Lin28 with the aim to enable highly efficient reprogramming of somatic cells to pluripotency.

Vaccinia virus is a large, complex, enveloped virus belonging to the poxvirus family. Poxviruses are unique among DNA viruses because they replicate only in the cytoplasm of the host cell, outside of the nucleus. Therefore, the large genome is required for encoding various enzymes and proteins involved in viral DNA replication and gene transcription. The close similarity of Vaccinia virus to smallpox virus led to

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its use as a vaccination to prevent smallpox. Vaccinia virus infection in healthy individuals is generally asymptomatic, or perhaps with a mild fever and rash. It does, however, produce lasting immunity against other pox viruses, including smallpox. Vaccinia virus has therefore been used as a live vaccine against smallpox, and although now not widely used it remains in use for healthcare workers, the US military, and researchers working with pox viruses. The use of the vaccine is associated with very rare, but severe side-effects, primarily in immunocompromised individuals.

Purity	>90% by SDS-PAGE
Formulation	DPBS pH 7.4
Stability	<p>Stability before reconstitution:</p> <p>At ambient temperature: 1 month</p> <p>At +4 centigrade: 12 months</p> <p>At <-20 centigrade: 24 months</p> <p>Stability after reconstitution:</p> <p>At -80 centigrade: 3 months</p>
Freezing	Can be frozen, but avoid multiple freeze/thaw cycles.
Storage	Store lyophilised product at 4 centigrade for short term, or frozen at -20 centigrade - -80 centigrade for long term. Product is shipped at ambient temperature
Concentration	Dependent upon reconstitution volume.
Notes	This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.

Type	Recombinant
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ClassID 1	Infectious Disease
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GENE INFORMATION

Synonyms	Vaccinia Virus B18R
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