Recombinant Rift Valley Fever Virus Nucleoprotein, His-tagged

Cat. No. RIF-557 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Rift Valley Fever Virus Nucleoprotein has been manufactured in response to the unmet need for highly purified, concentrated protein for use in serological based diagnostic assays. Rift Valley Fever Virus Nucleoprotein is engineered in human cells using state-of-the-art expression and purification techniques. The protein comprises amino acids 2-245, linked to an N-terminal His tag via a 10 amino acid glycine-serine linker
Tag	His
Background	Rift Valley fever (RVF), is an emerging zoonotic, mosquito-borne viral disease that primarily affects livestock but can also affect humans. The disease causes significant loss to livestock and severe illness and death in humans, having a significant economic impact in countries where RVF is prevalent. RVF is caused by the Rift Valley fever virus (RVFV), which was first recognised in the 1930s in the Rift Valley region of Kenya. Rift Valley fever virus is an enveloped RNA virus that belongs to the genus Phlebovirus, which is a member of the Bunyaviridae family of viruses. It is an arthropod-borne virus that is transmitted to domesticated livestock by mosquitoes. Several species of mosquito transmit RVFV, and the vector varies according to the geographical region. Cattle, sheep, goats, and camels are particularly susceptible to RVF and serve as amplifying hosts for the virus. Reports of RVFV outbreaks outside sub-Saharan Africa have raised concerns that RVFV may spread to temperate climates through emerging competent vectors. Humans may become infected through contact, via open wounds, with blood products, organs and bodily fluids from animals infected with RVFV. In some cases,

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	humans may be infected through the bite of infected mosquitoes, but this is uncommon. Human to human transmission of RVFV as not been reported to date (Pepin M, et al). In humans, the incubation period of RVFV is 2-6 days and infection may present in different ways. In many cases, individuals remain asymptomatic or may present with mild fever, arthralgia, myalgia and headaches. In some cases, patients have clinical symptoms that can be confused with meningitis. A small percentage of patients develop severe forms of RVF disease, which may present as ocular disease, meningoencephalitis or haemorrhagic fever. The haemorrhagic form of RVF carries the highest mortality risk (CDC). Currently, there is no antiviral therapy for the treatment of symptomatic cases of RVFV, and no licensed prophylactic vaccine to prevent RVFV infection. Diagnosis of RVFV in humans is achieved using serological methods, reverse transcriptase polymerase chain reaction (RT-PCR) or cell culture to isolate the virus. In 2015, the World Health Organization identified RVFV as an emerging disease that is likely to cause a severe epidemic and a significant risk to public health (WHO). Recent outbreaks of RVFV in Gambia and Kenya have renewed concerns about this emerging virus.
Purity	Greater than 95% purity
Sequence Strain	ZH-548(GenBank accession number YP 003848707.1)
Formulation	20m MTRIS-HCl pH8.0, 10m MNaCl
Freezing	Can be frozen, but avoid multiple freeze/thaw cycles.
Storage	Short Term Storage: +2 centigrade to +8 centigrade Long Term Storage: -80 centigrade

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Concentration	0.23 mg/mL
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
ClassID 1	Infectious Disease

GENE INFORMATION

Synonyms	Rift Valley Fever Virus Nucleoprotein

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