

# NEW ZEALAND DATA SHEET

## 1 PRODUCT NAME

Hepatitis B Immunoglobulin-VF 100 IU, solution for intramuscular injection

Hepatitis B Immunoglobulin-VF 400 IU, solution for intramuscular injection

## 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Human Hepatitis B Immunoglobulin

Hepatitis B Immunoglobulin-VF is a sterile solution containing 160 mg/mL human plasma proteins and 22.5 mg/mL glycine. At least 98% of the protein is immunoglobulins (mainly IgG), with a hepatitis B antibody titre of not less than 100 IU/mL.

Hepatitis B Immunoglobulin-VF is manufactured from human plasma donated by New Zealand's voluntary and non-remunerated donors.

Hepatitis B Immunoglobulin-VF contains no preservatives.

For the full list of excipients, see section 6.1.

## 3 PHARMACEUTICAL FORM

Solution for intramuscular injection.

The pH value of the ready-to-use solution is 6.6.

## 4 CLINICAL PARTICULARS

### 4.1 Therapeutic indications

Hepatitis B Immunoglobulin-VF is indicated for post-exposure prophylaxis in persons who did not receive prior vaccination, or whose prior vaccination regimen is incomplete, or when the hepatitis B antibody level is inadequate (<10 IU/L).

Post-exposure prophylaxis should be considered following percutaneous or permucosal exposure to the hepatitis B virus surface antigen (HBsAg)-positive or suspected HBsAg-positive material, for example, by needle stick, oral ingestion or sexual exposure.

Hepatitis B Immunoglobulin-VF is also indicated for prophylaxis in infants born to HBsAg-positive mothers.

### 4.2 Dose and method of administration

#### Dose

**Prophylaxis with Hepatitis B Immunoglobulin-VF in adults following percutaneous or permucosal exposure to HBsAg-positive or suspected HBsAg-positive material: Refer to Table 1.**

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**Table 1: Prophylaxis with Hepatitis B Immunoglobulin-VF in adults following percutaneous or permucosal exposure to HBsAg-positive or suspected HBsAg-positive material**

Source material	Vaccination history	
	No prior vaccination or incomplete vaccination regimen	Completed vaccination regimen
Confirmed positive for HBsAg	Give a single dose of 400 IU Hepatitis B Immunoglobulin-VF immediately <sup>a</sup> and initiate hepatitis B vaccination regimen at the same time.	Test exposed person for HBs antibody. If level is inadequate (<10 IU/L), give a single dose of 400 IU Hepatitis B Immunoglobulin-VF immediately plus a hepatitis B vaccine booster.
High risk for HBsAg, but not confirmed	Initiate hepatitis B vaccination regimen. Test source material for HBsAg and, if positive, give a single dose of 400 IU Hepatitis B Immunoglobulin-VF.	Test exposed person for HBs antibody. If level is inadequate (<10 IU/L), test source material for HBsAg and, if positive, give a single dose of 400 IU Hepatitis B Immunoglobulin-VF plus a hepatitis B vaccine booster.
Uncertain or low risk	Initiate hepatitis B vaccination regimen.	Nothing required.

<sup>a</sup> Hepatitis B Immunoglobulin-VF must be administered within 72 hours of exposure to the virus.

**Prophylaxis in infants born to HBsAg-positive mothers:**

Give infant 100 IU Hepatitis B Immunoglobulin-VF at birth and initiate hepatitis B vaccination regimen at the same time by giving first vaccine dose in a different limb.

**Method of administration**

Hepatitis B Immunoglobulin-VF should be brought to room temperature before use, and given slowly by deep intramuscular injection, using an appropriate sized needle. If a large dose (more than 5 mL) is required, it is advisable to administer it in divided doses at different sites. Hyaluronidase and/or a suitable local anaesthetic may be added to the injection if desired.

Active immunisation with hepatitis B vaccine should always be commenced in conjunction with administration of Hepatitis B Immunoglobulin-VF in patients exposed to hepatitis B virus.

For further instructions, see section 6.6.

**4.3 Contraindications**

Hepatitis B Immunoglobulin-VF is contraindicated in individuals:

- with isolated Immunoglobulin A (IgA) deficiency, unless they have been tested and shown not to have circulating anti-IgA antibodies.
- who have severe thrombocytopenia or any coagulation disorder that would contraindicate intramuscular injections.
- who are HBsAg-positive.

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Hepatitis B Immunoglobulin-VF is unnecessary in those who already have adequate circulating hepatitis B antibody ( $\geq 10$  IU/L).

### 4.4 Special warnings and precautions for use

#### Hypersensitivity

**Hepatitis B Immunoglobulin-VF MUST NOT be administered intravenously** because of the potential for anaphylactic reactions. Injections must be made intramuscularly, and care should be taken to draw back on the plunger of the syringe before injection in order to be certain that the needle is not in a blood vessel.

Hepatitis B Immunoglobulin-VF should be given with caution to patients with a history of prior systemic allergic reactions following the administration of human immunoglobulin preparations. In the case of shock, treatment should follow the guidelines of shock therapy.

#### Pathogen safety

This product is made from human plasma. Products made from human plasma may contain infectious agents, such as viruses and theoretically Creutzfeldt-Jakob Disease (CJD) agents, that can cause disease.

The risk that such products will transmit an infectious agent has been reduced by screening plasma donors for prior exposure to certain infectious agents and by testing for the presence of certain viral markers.

In addition, virus removal and inactivation procedures are included in the manufacturing process. The current procedures applied in the manufacture of this product are effective against enveloped viruses such as human immunodeficiency virus (HIV), hepatitis B virus (HBV) and hepatitis C virus (HCV), and the non-enveloped viruses, such as hepatitis A virus (HAV) and human parvovirus B19. Additionally, the product contains specific antibodies directed against human parvovirus B19.

Immunoglobulins for intramuscular injection, prepared by this process from plasma screened by current methods, have not been implicated in the transmission of viral infectious diseases including HIV. Studies using plasma spiked with HIV have shown that the Cohn cold-ethanol fractionation process produces a very large reduction in virus titre with undetectable levels in the immunoglobulin fraction. Epidemiological studies have not recognised any cluster of AIDS patients or HIV seroconversion in immunoglobulin recipients.

Despite these measures, such products may still potentially transmit disease. There is also the possibility that other known or unknown infectious agents may be present in such products. Vaccination for patients in receipt of medicinal products from human plasma should be considered where appropriate.

#### Genotoxicity and carcinogenicity

No genotoxicity or carcinogenicity studies have been conducted with Hepatitis B Immunoglobulin-VF. There have been no reports of such effects associated with the use of CSL Behring's plasma-derived products.

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### **Effects on laboratory tests**

After injection of immunoglobulin, the transitory rise of the various passively transferred antibodies in the patient's blood may result in misleading positive results in serological testing. There is no evidence to date that parvovirus B19 can be transmitted by Hepatitis B Immunoglobulin-VF, which is known to contain antibodies to the virus and the nanofiltration step of the manufacturing process has been shown to remove such viruses (or viruses of similar size).

### **4.5 Interaction with other medicines and other forms of interaction**

Hepatitis B Immunoglobulin-VF should not be mixed with other pharmaceutical products, except as indicated (see section 4.2).

### **Hepatitis B vaccine**

If hepatitis B vaccine is administered at the same time as Hepatitis B Immunoglobulin-VF it should be given in a different limb.

### **Vaccinations with live attenuated virus vaccines**

Passively acquired antibody can interfere with the response to live, attenuated virus vaccines. Therefore, administration of such vaccines, e.g. poliomyelitis or measles, should be deferred until approximately three months after passive immunisation. If Hepatitis B Immunoglobulin-VF is administered within two weeks of vaccination with a live attenuated virus vaccine, the efficacy of the vaccine may be compromised. Consideration should be given to re-vaccination approximately three months after Hepatitis B Immunoglobulin-VF was given.

### **4.6 Fertility, pregnancy and lactation**

#### **Pregnancy**

The safety of this medicinal product for use in human pregnancy has not been established in controlled clinical trials. Hepatitis B Immunoglobulin-VF should therefore only be given with caution to pregnant women.

#### **Breast-feeding**

The safety of this medicinal product for use during lactation has not been established in controlled clinical trials. Hepatitis B Immunoglobulin-VF should therefore only be given with caution to breast-feeding mothers. Immunoglobulins are excreted in breast milk, however, it is not known whether this applies to passively administered Hepatitis B Immunoglobulin-VF.

#### **Fertility**

No reproductive toxicity studies have been conducted with Hepatitis B Immunoglobulin-VF. There have been no reports of such effects associated with the use of CSL Behring's plasma-derived products.

### **4.7 Effects on ability to drive and use machines**

No effects on ability to drive and use machines have been observed.

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### 4.8 Undesirable effects

#### Summary of the safety profile

Local tenderness, erythema and stiffness may occur at the site of injection and may persist for several hours. This may occur after any intramuscular injection.

Mild pyrexia, malaise, drowsiness and urticaria have been reported occasionally after injections of immunoglobulins. True allergic responses are rare. Skin lesions, headache, dizziness, nausea, generalised hypersensitivity reactions and convulsions have been reported on rare occasions.

#### Clinical studies

In the clinical trial with Hepatitis B Immunoglobulin, the following general and local reactions were recorded in the 58 healthy subjects (total number of events, up to and including 7 days post injection; pasteurised/unpasteurised product): malaise (20/22 events), drowsiness (13/17 events), induration (10/4 events), sensation of fever (4/4 events), chills (3/3 events), sweating (3/1 events) and warmth/heat when touched (0/4 events). There was an overall higher reporting of local tolerance adverse events at the injection site for the unpasteurised product, such as pain (32/52 events), bruising (10/22 events), redness (2/8 events) and irritation (2/4 events).

#### Paediatric population

The use of this product in the paediatric population has not been established in appropriate studies. To date, this population is not over-represented in spontaneous reports of adverse events associated with the use of CSL Behring's intramuscular immunoglobulin products.

#### Elderly population

The use of this product in the elderly population has not been established in appropriate studies. To date, this population is not over-represented in spontaneous reports of adverse events associated with the use of CSL Behring's intramuscular immunoglobulin products.

#### Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Healthcare professionals are asked to report any suspected adverse reactions <https://nzphvc.otago.ac.nz/reporting/>

### 4.9 Overdose

The consequences of overdosage are not known.

For advice on the management of overdose please contact the National Poisons Centre on 0800 POISON (0800 764766).

## 5 PHARMACOLOGICAL PROPERTIES

### 5.1 Pharmacodynamic properties

Pharmacotherapeutic group: immune sera and immunoglobulins, human hepatitis B immunoglobulin.

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Hepatitis B Immunoglobulin-VF is prepared from human plasma. Donations are selected on the basis that they contain high levels of antibody to HBsAg. The manufacturing process for Hepatitis B Immunoglobulin-VF contains specific steps to reduce the possibility of viral transmission including pasteurisation for viral inactivation and nanofiltration for virus removal.

### **Mechanism of action**

Hepatitis B Immunoglobulin-VF contains specific neutralising antibodies (mainly IgG) against HBsAg.

### **Clinical efficacy and safety**

A comparative clinical trial was conducted to investigate the effect of pasteurisation on the *in vivo* behaviour of intramuscular immunoglobulins using Hepatitis B Immunoglobulin (pasteurised and unpasteurised) as the representative of this group of products.

Fifty-eight (58) healthy subjects (28 males and 30 females) each received an intramuscular injection of pasteurised (viral inactivated) or unpasteurised Hepatitis B Immunoglobulin. No significant clinical differences were observed.

Twenty-eight (28) subjects received the viral inactivated product. Maximal serum concentration of IgG was reached after  $8.0 \pm 5.5$  days (mean  $\pm$  s.d.), and the estimated half-life of IgG was  $27.2 \pm 6.6$  days (mean  $\pm$  s.d.). The IgG levels remained at protective levels for at least 6 weeks. These values are consistent with ranges observed with other intramuscular immunoglobulin products.

A clinical trial with Hepatitis B Immunoglobulin-VF has not been conducted.

## **5.2 Pharmacokinetic properties**

### **Absorption and Distribution**

Hepatitis B Immunoglobulin-VF for intramuscular administration is bioavailable in the recipient's circulation after 2 to 3 days. Human hepatitis B immunoglobulin has a half-life of about 3 to 4 weeks. This half-life may vary from patient to patient.

### **Elimination**

IgG and IgG-complexes are broken down in cells of the reticuloendothelial system.

## **5.3 Preclinical safety data**

Animal reproduction studies have not been conducted with Hepatitis B Immunoglobulin-VF.

Hepatitis B Immunoglobulin-VF with hepatitis B IgG as the active ingredient is derived from human plasma and acts like an endogenous constituent of plasma. Preclinical studies with repeated dose applications (chronic toxicity, carcinogenicity and mutagenicity) cannot be reasonably performed in conventional animal models due to the development of antibodies following the application of heterologous human proteins.

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### 6 PHARMACEUTICAL PARTICULARS

#### 6.1 List of excipients

Glycine

Water for injections

#### 6.2 Incompatibilities

This medicine must not be mixed with other medicines, diluents, or solvents except those mentioned in section 4.2.

#### 6.3 Shelf life

3 years

##### **Shelf life after first opening:**

The product does not contain an antimicrobial preservative. It must, therefore, be used immediately after opening the vial.

#### 6.4 Special precautions for storage

Store at 2°C to 8°C (Refrigerate. Do not freeze).

Protect from light.

For storage conditions of the medicine after first opening, see section 6.3.

#### 6.5 Nature and contents of container

Solution in a single glass vial, with a rubber stopper, an aluminium seal and a plastic flip-top cap.

##### **Pack sizes**

1 vial with 100 IU hepatitis B antibody

1 vial with 400 IU hepatitis B antibody

The actual volume in the vial is stated on the label.

Hepatitis B Immunoglobulin-VF is packaged in latex free materials.

#### 6.6 Special precautions for disposal and other handling

Hepatitis B Immunoglobulin-VF is a sterile, ready-to-use solution.

If the product appears to be turbid by transmitted light or contains any sediment it must not be used.

Any unused solution must be discarded appropriately.

### 7 MEDICINE SCHEDULE

Prescription Medicine

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### 8 SPONSOR

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### 9 DATE OF FIRST APPROVAL

11 February 1999

### 10 DATE OF REVISION OF THE TEXT

10 December 2018

### SUMMARY TABLE OF CHANGES

Section changed	Summary of new information
All	Data sheet reformatted to the SPC format
5.2	New section added
5.3	New section added
8	Sponsor contact information amended.