

# **AUSTRALIAN PRODUCT INFORMATION – SIMULECT (BASILIXIMAB) POWDER FOR INJECTION WITH DILUENT**

## **1 NAME OF THE MEDICINE**

Basiliximab (rnc)

## **2 QUALITATIVE AND QUANTITATIVE COMPOSITION**

Each vial of Simulect contains 20 mg basiliximab as a sterile freeze-dried powder for reconstitution with water for injections.

For the full list of excipients, see Section 6.1 List of excipients.

## **3 PHARMACEUTICAL FORM**

Powder for Injection with diluent.

## **4 CLINICAL PARTICULARS**

### **4.1 THERAPEUTIC INDICATIONS**

Simulect is indicated for the prophylaxis of acute organ rejection in renal transplantation.

### **4.2 DOSE AND METHOD OF ADMINISTRATION**

#### **Adult Dose**

The adult dose of Simulect is 40 mg, given as two 20 mg doses, by intravenous injection. The first 20 mg dose is given within 2 hours prior to transplantation surgery. Simulect must not be administered unless it is absolutely certain that the patient will receive the graft and concomitant immunosuppression. The second 20 mg dose is given 4 days after transplantation. The second dose should be withheld if severe hypersensitivity reactions to Simulect or post-operative complications such as graft loss occur (see Section 4.4 Special Warnings and Precautions for Use).

#### **Paediatric Dose**

In paediatric patients weighing less than 35 kg, the recommended total dose of Simulect is 20 mg, given in two doses of 10 mg each. In paediatric patients weighing 35 kg or more, the recommended dose is the adult dose, i.e. a total dose of 40 mg, given in two doses of 20 mg each. The first dose is given within 2 hours prior to transplantation surgery. Simulect must not be administered unless it is absolutely certain that the patient will receive the graft and concomitant immunosuppression. The second dose is given 4 days after transplantation. The second dose should be withheld if severe hypersensitivity reactions to Simulect or post-operative complications such as graft loss occur (see Section 4.4 Special Warnings and Precautions for Use).

### **Instructions for Use**

Simulect is reconstituted and administered either as an intravenous infusion over 20 to 30 minutes or as a bolus injection. Since no data are available on the compatibility of Simulect with other intravenous substances, Simulect should always be given through a separate infusion line.

#### **Simulect 20 mg**

To prepare the injection solution, add 5 mL water for injections from the accompanying ampoule aseptically to the vial containing the Simulect powder. Shake the vial gently to dissolve the powder. Use the reconstituted solution as soon as possible and discard any residue. However, if needed the reconstituted solution can be stored at 2 to 8°C for 24 hours. Discard the reconstituted solution if not used within 24 hours.

The reconstituted solution is isotonic and may be given as a bolus injection or diluted to a volume of 50 mL or greater with normal saline or dextrose 5% for infusion.

### **4.3 CONTRAINDICATIONS**

Simulect is contraindicated in patients with known hypersensitivity to basiliximab or any other component of the formulation (see Section 6.1 List of Excipients).

### **4.4 SPECIAL WARNINGS AND PRECAUTIONS FOR USE**

Basiliximab should be prescribed only by physicians who are experienced in immunosuppressive therapy following organ transplantation.

#### **Hypersensitivity reactions**

Patients receiving Simulect should be managed in facilities equipped and staffed with adequate laboratory and supportive medical resources. Medications for treatment of hypersensitivity should be available for immediate use (e.g. adrenaline). Severe acute (less than 24 hours) hypersensitivity reactions have been observed, both on initial exposure to Simulect and on re-exposure to a subsequent course of therapy. These included anaphylactoid type reactions such as rash, urticaria, pruritus, sneezing, wheezing, hypotension, tachycardia, dyspnoea, bronchospasm, pulmonary oedema, cardiac failure, respiratory failure and capillary leak syndrome. If severe hypersensitivity occurs, therapy with Simulect should be permanently discontinued and no further dose should be administered. Caution should be exercised when patients previously given Simulect are re-exposed to a subsequent course of therapy with this medicine.

There is accumulating evidence that a subgroup of patients is at increased risk of developing hypersensitivity reactions. These are patients in whom, following the initial administration of Simulect, the concomitant immunosuppression was discontinued prematurely due, for example, to abandoned transplantation or early loss of the graft. Acute hypersensitivity reactions were observed on re-administration of Simulect for a subsequent transplantation in some of these patients.

### **Malignancy and lymphoproliferative disorders**

Transplant patients receiving immunosuppressive regimens involving combinations with or without Simulect are at an increased risk of developing cancer and lymphoproliferative disorders (such as lymphoma). In a pooled analysis of two five year extension studies, no differences were found in the incidence of malignancies and LPDs between immunosuppressive regimens with or without Simulect (see Section 4.8 - Adverse Effects (Undesirable Effects)).

### **Opportunistic infections**

Transplant patients receiving immunosuppressive regimens involving combinations with or without Simulect are at an increased risk of developing opportunistic infections (such as cytomegalovirus, CMV) and should be appropriately monitored. In clinical trials, the incidence of opportunistic infections was similar in patients using immunosuppressive regimens with or without Simulect.

### **Vaccination**

No data are available on either the effect of live and inactive vaccination or the transmission of infection by live vaccines in patients receiving Simulect. Nevertheless, live vaccines are not recommended for immunosuppressed patients. Inactivated vaccines may be administered to immunosuppressed patients; however, response to the vaccine may depend on the degree of the immunosuppression.

### **Heart transplant**

The efficacy and safety of Simulect for the prophylaxis of acute rejection in recipients of solid organ allografts other than renal have not been demonstrated. In several small clinical trials in heart transplant recipients, serious cardiac adverse events such as cardiac arrest (2.2%), atrial flutter (1.9%) and palpitations (1.4%) have been reported more frequently with Simulect than with other induction agents.

### **Use in the elderly**

There are limited data available on the use of basiliximab in the elderly, but there is no evidence that elderly patients require a different dosage or experience side effects different from those in younger adult patients.

### **Paediatric use**

Refer to Pharmacology; Clinical Trials; Adverse Effects and Dosage and Administration sections.

## **4.5 INTERACTIONS WITH OTHER MEDICINES AND OTHER FORMS OF INTERACTIONS**

Because basiliximab is an immunoglobulin, no metabolic interactions are to be expected with basiliximab.

### **Concomitant medications routinely administered in organ transplant**

In addition to Neoral, corticosteroids, azathioprine and mycophenolate mofetil, other concomitant medications routinely administered in organ transplantation have been administered in clinical trials without any incremental adverse reactions. These concomitant medications include systemic antiviral, antibacterial and antimycotic medications, analgesics, antihypertensive medications such as beta-blocking agents or calcium channel blockers, and diuretics.

Three clinical trials have investigated Simulect use in combination with a triple therapy regimen which included either azathioprine (Study CHI INT 10) or mycophenolate mofetil (Studies CHI INT 11 and CHI US 01). The total body clearance of basiliximab was reduced by an average of 22% when azathioprine was added to a regimen consisting of Neoral and corticosteroids. The total body clearance of basiliximab was reduced by an average of 51% when mycophenolate mofetil was added to a regimen consisting of Neoral and corticosteroids. The use of Simulect in a triple therapy regimen including azathioprine or mycophenolate mofetil did not increase adverse events or infections in the basiliximab group as compared to placebo (see Section 4.8 - Adverse Effects (Undesirable Effects)).

#### **Human antimurine antibody (HAMA)**

Human antimurine antibody (HAMA) responses were reported in a clinical trial of 172 patients treated with Simulect. The incidence was 2/138 in patients not exposed to muromonab-CD3 and 4/34 in patients who received muromonab-CD3 concomitantly (see Section 4.8 - Adverse Effects (Undesirable Effects)).

### **4.6 FERTILITY, PREGNANCY AND LACTATION**

#### **Effects on fertility**

No fertility studies have been conducted.

#### **Use in pregnancy – Pregnancy Category D**

Women of childbearing potential must use adequate contraception to prevent pregnancy and continue its use for an additional four months after the last dose of basiliximab. Basiliximab has potentially hazardous pharmacological effects based on its immunosuppressive action. There is no adequate information for use in pregnant women.

No maternal toxicity, embryotoxicity, or teratogenicity was observed in cynomolgous monkeys 100 days *post coitum* following dosing with basiliximab during the organogenesis period. Serum basiliximab AUC values were about 6 to 13-fold higher than those seen in women at the maximum recommended dose.

#### **Use in lactation**

It is not known whether basiliximab is excreted in human milk. Since basiliximab is an immunoglobulin G (IgG<sub>1κ</sub>) antibody, it may be excreted in human milk. Because of its immunosuppressive action, basiliximab has potentially hazardous pharmacological effects with respect to the neonate exposed to basiliximab in breast milk. Women receiving basiliximab should not breastfeed for four months following the last dose.

### **4.7 EFFECTS ON ABILITY TO DRIVE AND USE MACHINES**

No studies on the effects on the ability to drive and use machines have been performed. Basiliximab is not expected to affect the ability to drive or use machines.

## 4.8 ADVERSE EFFECTS (UNDESIRABLE EFFECTS)

### Summary of the safety profile

Simulect has been tested in four randomised, double-blind, placebo-controlled studies in renal transplant recipients. In two studies patients were concomitantly treated with Neoral and corticosteroids (Studies B201 and B352). In one study patients were concomitantly treated with Neoral, azathioprine and corticosteroids (Study CHI INT 10) and in one study patients were concomitantly treated with Neoral, mycophenolate mofetil and corticosteroids (Study CHI INT 11). Simulect has also been compared to a polyclonal anti-T-lymphocyte immunoglobulin preparation (ATG/ALG) in one active-controlled study in renal transplant recipients (Study CHI US 01). In that study, all patients were concomitantly treated with Neoral, mycophenolate mofetil and corticosteroids.

### Incidence of Adverse Effects

Basiliximab does not appear to add to the notable background of adverse events seen in organ transplant patients as a consequence of their underlying disease and the concurrent administration of immunosuppressants and other medications. In the four placebo-controlled trials, the pattern of adverse events in 590 patients treated with the recommended dose of basiliximab was indistinguishable from that in 595 patients treated with placebo. Basiliximab did not increase the incidence of serious adverse events observed when compared to placebo. The overall incidence of treatment-related adverse events among all patients in the individual studies was not significantly different between the basiliximab (7.1% - 40%) and the placebo (7.6% - 39%) treatment groups. In the active-controlled study, fewer basiliximab (11.4%; n = 70) than ATG/ALG (41.5%; n = 65) patients experienced treatment-related adverse events.

### Adult experience

The most commonly reported events ( $\geq 20\%$ ) in the four placebo-controlled studies are shown in Tables 1 and 2. The pattern of adverse events was similar in patients receiving the recommended dose in uncontrolled trials.

**Table 1: Most commonly reported adverse events ( $\geq 20\%$ ) in placebo-controlled trials in patients treated with basiliximab or placebo plus Neoral and corticosteroids (Studies B201 and B352 combined)**

Adverse event (%)	Basiliximab n=363	Placebo n=359
<b>Body as a whole:</b>		
Pain	42	39
Fever	20	24
<b>Cardiovascular:</b>		

Oedema – peripheral	29	30
Hypertension	27	26
Oedema – general	21	20
<b>Central and peripheral nervous system:</b>		
Headache	24	22
Insomnia	24	28
<b>Gastrointestinal:</b>		
Constipation	48	49
Nausea	34	40
Abdominal pain	21	27
Diarrhoea	21	19
Vomiting	20	22
<b>Urinary Tract:</b>		
Urinary tract infection	46	46
<b>Haematological:</b>		
Anaemia	26	28
<b>Metabolic:</b>		
Hyperkalaemia	22	24
<b>Respiratory:</b>		
Upper respiratory tract infection	20	18

**Table 2: Most commonly reported adverse events ( $\geq 20\%$  in any group) in placebo-controlled trials in patients treated with triple therapy: basiliximab or placebo plus Neoral, corticosteroids and azathioprine (Study CHI INT 10) or mycophenolate mofetil (Study CHI INT 11)**

	Study CHI INT 10 (with azathioprine)	Study CHI INT 11 (with mycophenolate mofetil)

<b>Adverse event (%)</b>	<b>Basiliximab n=168</b>	<b>Placebo n=172</b>	<b>Basiliximab n=59</b>	<b>Placebo n=64</b>
<b>Body as a whole:</b>				
Pain	16	19	42	38
Fever	6	8	15	25
<b>Cardiovascular:</b>				
Oedema - peripheral	1	1	27	28
Hypertension	28	26	36	33
Oedema - general	1	1	22	19
<b>Central and peripheral nervous system:</b>				
Insomnia	12	17	34	13
Tremor	6	6	19	27
<b>Gastrointestinal:</b>				
Constipation	17	19	39	31
Nausea	8	6	20	30
Abdominal pain	7	9	19	22
Diarrhoea	5	6	9	23
<b>Urinary tract:</b>				
Unspecified bladder disorders	3	4	12	20
<b>Haematological:</b>				
Anaemia	19	14	34	34
<b>Metabolic:</b>				
Hypercholesterolaemia	11	8	22	20
Hyperkalaemia	10	7	20	17
<b>Skin and appendages:</b>				
Surgical wound complication	2	1	22	11

Weight increase, increase blood creatinine, hypophosphataemia were also commonly reported (>20%) following dual or triple therapy in both treatment groups (Simulect vs placebo or ATG/ALG).

### **Experience in paediatric patients**

Safety data in paediatric patients have been obtained from one open-label pharmacokinetic and pharmacodynamic study in 41 renal transplant recipients (Study CHIB 152-E-00).

The most commonly reported (>20%) events following dual therapy in both (<35 kg vs. ≥35 kg weight) cohorts combined were hypertrichosis, rhinitis, pyrexia, hypertension, urinary tract infection, fever, upper respiratory tract infection, sepsis, constipation, viral infection, bronchitis, pharyngitis, diarrhoea and gum hyperplasia.

### **Antibody response**

Of 339 renal transplant patients treated with basiliximab and tested for anti-idiotypic antibodies, four (1.2%) developed an anti-idiotypic antibody response. Of 172 patients receiving basiliximab in a clinical trial, six (3.5%) developed a human anti-mouse antibody (HAMA) response. However, the use of basiliximab does not preclude subsequent treatment with murine anti-lymphocytic antibody preparations (see Section 4.5 Interactions with Other Medicines and Other Forms of Interactions).

### **Malignancy and lymphoproliferative disorders**

The overall incidence of malignancies among all patients in the individual studies was similar between the basiliximab and the comparator treatment groups. Overall, lymphoma / lymphoproliferative disease occurred in 0.1% (1/701) of patients in the basiliximab group compared with 0.3% (2/595) of placebo and 0% of ATG/ALG patients.

Other malignancies were reported among 1.0% (7/701) of patients in the basiliximab group compared with 1.2% (7/595) of placebo and 4.6% (3/65) of ATG/ALG patients.

In uncontrolled, phase I-II studies, post-transplantation lymphoproliferative disorder occurred in approximately 4% (4/94) of patients who received basiliximab. Three of the four patients received a higher dose of basiliximab than that recommended and all four patients received a regimen with three or four other immunosuppressants combined with basiliximab. No increase in lymphoproliferative disorders was observed in clinical trials of patients receiving triple therapy regimens which included Neoral and either azathioprine (Study CHI INT 10) or mycophenolate mofetil (Studies CHI INT 11 and CHI US 01).

The incidences of malignancy and lymphoproliferative disorder were similar in the 12-month to 5-year extension phases of trials B201 and B352 and comparable in the two treatment groups: malignancy 7% and lymphoproliferative disorder <1%.

### **Incidence of infectious episodes**

The overall incidence and profile of infectious episodes among dual and triple therapy patients was similar between the basiliximab and the placebo treatment groups (basiliximab = 75.9%, placebo or ATG/ALG = 75.6%). The incidence of serious infections was 26.1% in the basiliximab group and 24.8% in the comparator group. The overall incidence of CMV-infections was similar in both groups (14.6% vs. 17.3%) following either a dual or triple therapy regimen. In patients receiving dual therapy, there was no difference between the Simulect and placebo groups in the incidence of



serious CMV. However, in patients receiving a triple immunosuppression regimen, the incidence of serious CMV infection was numerically higher in Simulect treated patients compared to placebo-treated patients (11% vs 5%).

### **Deaths**

The incidence and causes of death following dual or triple therapy were similar in basiliximab (2.9%) and placebo or ATG/ALG groups (2.6%), with the most common cause of death in both treatment groups being infection (basiliximab = 1.3%, placebo or ATG/ALG = 1.4%). In a pooled analysis of two five-year extension studies (B201 and B352) the incidence and cause of death remained similar in both treatment groups (basiliximab 15%, placebo 11%), the primary cause of death being cardiac-related disorders, such as cardiac failure and myocardial infarction (basiliximab 5%, placebo 4%).

### **Post-marketing Experience**

The following adverse effects have been identified based on post-marketing spontaneous reports and are organized by system organ classes. Because these reactions are reported voluntary from a population of uncertain size, it is not always possible to reliably estimate their frequency.

Cases of hypersensitivity / anaphylactoid type reactions such as rash, urticaria, pruritus, sneezing, wheezing, bronchospasm, dyspnoea, pulmonary oedema, cardiac failure, hypotension, tachycardia, respiratory failure, capillary leak syndrome, as well as individual cases of suspected cytokine release syndrome have been reported during post-marketing experience with Simulect.

### **Reporting suspected adverse effects**

Reporting suspected adverse reactions after registration of the medicinal product is important. It allows continued monitoring of the benefit-risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions at [www.tga.gov.au/reporting-problems](http://www.tga.gov.au/reporting-problems).

## **4.9 OVERDOSE**

Basiliximab has been administered to humans in clinical studies in single doses of up to 60 mg and multiple doses of up to 150 mg over 24 days with no untoward acute effects.

For information on the management of overdose, contact the Poisons Information Centre on 13 11 26 (Australia).

# **5 PHARMACOLOGICAL PROPERTIES**

## **5.1 PHARMACODYNAMIC PROPERTIES**

### **Mechanism of action**

Basiliximab is a murine/human chimeric monoclonal antibody (IgG<sub>1κ</sub>) that is directed against the interleukin-2 receptor alpha-chain (CD25 antigen), which is expressed on the surface of T-lymphocytes in response to antigenic challenge.

Basiliximab specifically binds to the CD25 antigen on activated T-lymphocytes expressing the high affinity interleukin-2 receptor and thereby prevents binding of interleukin-2, the signal for T-cell proliferation. Complete and consistent blocking of the interleukin-2 receptor is maintained as long as serum basiliximab levels exceed 0.2 microgram/mL. As concentrations fall below this level,

expression of the CD25 antigen returns to pretherapy values within 1-2 weeks. Basiliximab does not cause myelosuppression.

## Clinical trials

### Simulect in combination with Neoral® and corticosteroids

The safety and efficacy of basiliximab in combination with Neoral® and steroids for the prevention of organ rejection following renal transplantations were assessed in two randomised, double-blind, multicentre trials (Studies B201 and B352). These studies compared placebo with basiliximab 40 mg, administered as two 20 mg IV doses, the first dose given within 2 hours prior to transplantation surgery (Day 0) and the second dose given on Day 4 post-transplantation. The dose of basiliximab was chosen to provide 30-45 days suppression of the  $\alpha$ -chain of the interleukin-2 receptor (IL-2R $\alpha$ ). Chronic dual immunosuppressive therapy consisted of Neoral and steroids, administered starting on Day 0. Patients 18-75 years of age undergoing first cadaveric or living-donor renal transplantation with  $\geq 1$  HLA mismatch were enrolled. A total of 729 patients were enrolled in the 2 studies, of which 363 basiliximab-treated patients and 359 placebo-treated patients received transplants.

The primary study endpoint in both studies was the incidence of death, graft loss or an episode of acute rejection in the first 6 months post-transplantation. The percentage of patients experiencing an episode of biopsy-confirmed acute rejection, and the percentage of patients experiencing acute rejection treated with antibody therapy were also compared.

Basiliximab, in combination with Neoral and steroids, produced statistically significant reductions in the incidence of acute rejection, biopsy-confirmed acute rejection, and acute rejection treated with antibody therapy during the first 6 months and 12 months post-transplantation. Table 3 summarises the results of the two studies.

**Table 3: Percentage of Patients with Acute Rejection Episode, Graft Loss or Death, Biopsy-Confirmed Acute Rejection, and Acute Rejection Treated with Antibody Therapy by Study**

	Study B201			Study B352		
	Basiliximab (n=190)	Placebo (n=186)	p-value	Basiliximab (n=173)	Placebo (n=173)	p-value
Acute rejection episode, graft loss or death						
Months 0-6						
Months 0-12	<b>42%</b>	<b>57%</b>	<b>0.003</b>	<b>38%</b>	<b>55%</b>	<b>0.002</b>
	<b>46%</b>	<b>60%</b>	<b>0.007</b>	<b>41%</b>	<b>58%</b>	<b>0.002</b>

Biopsy-Confirmed Rejection Episode						
Months 0-6	<b>30%</b>	<b>44%</b>	<b>0.012</b>	<b>33%</b>	<b>46%</b>	<b>0.005</b>
Months 0-12	<b>32%</b>	<b>46%</b>	<b>0.010</b>	<b>35%</b>	<b>49%</b>	<b>0.005</b>
Rejection Treated with Antibody Therapy						
Months 0-6						
Months 0-12	<b>10%</b>	<b>23%</b>	<b>0.016</b>	<b>18%</b>	<b>28%</b>	<b>0.047</b>
	<b>11%</b>	<b>23%</b>	<b>0.054</b>	<b>20%</b>	<b>29%</b>	<b>0.038</b>

Both studies had a voluntary open-label extension phase. Approximately 85% of subjects entered the extension of trial B201 and 75% of trial B352. The number and demographic characteristics of subjects entering the extension were similar in the two treatment groups. Deaths and graft losses 5 years post-transplant were similar for basiliximab and placebo in the 2 trials except in one instance, deaths in trial B201, which favoured the placebo group (8% vs basiliximab 17%,  $p=0.007$ ) and may have been a chance finding.

Data from the extension studies also showed that patients who experienced an acute rejection episode during the first year after transplantation experienced more graft losses and deaths over the five-year follow-up period than patients who had no rejection. These events were not influenced by Simulect.

#### **Simulect in triple immunosuppressive regimens:**

Two double-blind, randomised, placebo controlled studies assessed the safety and efficacy of Simulect for prophylaxis of acute renal transplant rejection in adults when used in combination with a triple immunosuppressive regimen. In study CHI INT 10, Simulect significantly reduced the incidence of acute rejection episodes within 6 months after transplantation, when used concomitantly with Neoral, corticosteroids and azathioprine (21% vs 35%,  $p=0.005$ , Fisher's exact test). In study CHI INT 11, Simulect or placebo was used concomitantly with Neoral, corticosteroids and mycophenolate mofetil. Use of Simulect resulted in a numerically lower incidence of acute rejection episodes in the first six months (15% vs 27%) although the difference was not statistically significant.

### **Simulect in paediatric *de novo* renal transplant recipients:**

Simulect was used concomitantly with Neoral and steroids in an uncontrolled trial in paediatric *de novo* renal transplant recipients (Study CHIB 152-E-00). Acute rejection occurred in 14.6% of patients by 6 months post-transplantation, and in 24.3% by 12 months. Overall the adverse event profile was consistent with general clinical experience in the paediatric renal transplantation population and with the profile in the controlled adult transplantation studies.

## **5.2 PHARMACOKINETIC PROPERTIES**

Single and multiple-dose pharmacokinetic studies have been conducted in patients undergoing renal transplantation. Cumulative doses ranged from 15 mg up to 150 mg.

### **Absorption**

The mean peak serum concentration of basiliximab following an intravenous infusion of 20 mg over 30 minutes is  $7.1 \pm 5.1$  mg/L. There is a proportional increase in  $C_{max}$  and AUC with dose, up to the highest tested single dose of 60 mg.

### **Distribution**

The mean steady state volume of distribution is  $8.6 \pm 4.1$  L. The extent and degree of distribution to various body compartments have not been fully studied. *In vitro* studies using human tissues indicate that basiliximab binds only to lymphocytes and macrophages / monocytes.

### **Excretion**

Serum concentrations decline in a biphasic manner with a terminal half-life of  $7.2 \pm 3.2$  days. Total body clearance is  $41 \pm 19$  mL/hr. No clinically relevant influence of body weight or gender on distribution volume or clearance has been observed in adult patients. Elimination half-life was not influenced by age (20-69 years), gender or race.

### **Pharmacokinetic characteristics in other patient groups**

**Paediatric:** The pharmacokinetics of basiliximab were assessed in 39 paediatric *de novo* renal transplantation patients. In infants and children (age 1–11 years, n=25), the steady-state distribution volume was  $4.8 \pm 2.1$  L, half-life was  $9.5 \pm 4.5$  days and clearance was  $17 \pm 6$  mL/h. Distribution volume and clearance are reduced by about 50% compared to adult renal transplantation patients. Disposition parameters were not influenced to a clinically relevant extent by age (1–11 years), body weight (9–37 kg) or body surface area ( $0.44 - 1.20$  m<sup>2</sup>) in this age group. In adolescents (age 12–16 years, n=14), the steady-state distribution volume was  $7.8 \pm 5.1$  L, half-life was  $9.1 \pm 3.9$  days and clearance was  $31 \pm 19$  mL/h. Disposition in adolescents was similar to that in adult renal transplantation patients. The relationship between serum concentration and receptor saturation was assessed in 13 patients and was similar to that characterised in adult renal transplantation patients.

### **5.3 PRECLINICAL SAFETY DATA**

#### **Genotoxicity**

No genotoxic potential was observed in two in vitro studies for gene mutation (an Ames test) and chromosomal damage (cytogenetics assay in V79 Chinese hamster cells).

#### **Carcinogenicity**

No carcinogenicity studies were done.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 LIST OF EXCIPIENTS**

Inactive ingredients: potassium phosphate monobasic, sodium phosphate dibasic anhydrous, sodium chloride, sucrose, mannitol, glycine, and water for injections (once reconstituted).

### **6.2 INCOMPATIBILITIES**

Incompatibilities were either not assessed or not identified as part of the registration of this medicine.

### **6.3 SHELF LIFE**

In Australia, information on the shelf life can be found on the public summary of the Australian Register of Therapeutic Goods (ARTG). The expiry date can be found on the packaging.

### **6.4 SPECIAL PRECAUTIONS FOR STORAGE**

Store at 2 to 8°C. Refrigerate, do not freeze.

### **6.5 NATURE AND CONTENTS OF CONTAINER**

Glass vials containing 20mg sterile freeze-dried basiliximab; packs of 1 vial and 1 ampoule of 5 mL of water for injections (WFI).

Note: Not all pack sizes may be marketed.

### **6.6 SPECIAL PRECAUTIONS FOR DISPOSAL**

In Australia, any unused medicine or waste material should be disposed of by taking to your local pharmacy.

### **6.7 PHYSICOCHEMICAL PROPERTIES**

Simulect (basiliximab) is a monoclonal antibody that functions as an immunosuppressive agent.

#### **Chemical name**

Chimeric murine /human monoclonal antibody (IgG<sub>1κ</sub>)

**CAS number**

179045-86-4

**Physical Description:** White lyophilisate**Solubility:** Water soluble**pH value of reconstituted solution:** 6.5**7 MEDICINE SCHEDULE (POISONS STANDARD)**

Prescription Only Medicine (Schedule 4)

**8 SPONSOR**

Novartis Pharmaceuticals Australia Pty Limited  
ABN 18 004 244 160  
54 Waterloo Road,  
MACQUARIE PARK NSW 2113  
Telephone: 1 800 671 203  
Web site: [www.novartis.com.au](http://www.novartis.com.au)

**9 DATE OF FIRST APPROVAL**

30 August 2004

**10 DATE OF REVISION**

22 October 2020

® = Registered Trademark

**SUMMARY TABLE OF CHANGES**

<b>Section Changed</b>	<b>Summary of new information</b>
<b>All</b>	SmPC reformat
<b>2, 4.2, 6.4 &amp; 6.5</b>	Removal of 10 mg strength
<b>6.7</b>	Addition of CAS number
<b>8</b>	Corrected suburb of sponsor address

---

(sml221020i.doc) based on CDS dated 12 April 2011 and TGA request dated 28 April 2015 (TRIM Ref: R15/327973)