

Date: 13 May 2026

Swissmedic, Swiss Agency for Therapeutic Products

## **Swiss Public Assessment Report**

### **Enflonsia**

**International non-proprietary name:** clesrovimab

**Pharmaceutical form:** solution for injection in pre-filled syringe

**Dosage strength(s):** 105 mg / 0.7 mL

**Route(s) of administration:** intramuscular use

**Marketing authorisation holder:** MSD Merck Sharp & Dohme AG

**Marketing authorisation no.:** 70145

**Decision and decision date:** approved on 22 January 2026

**Note:**

This assessment report is as adopted by Swissmedic with all information of a commercially confidential nature deleted.

SwissPARs are final documents that provide information on submissions at a particular point in time. They are not updated after publication.

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## 1 Terms, Definitions, Abbreviations

ADA	Anti-drug antibody
ADME	Absorption, distribution, metabolism, elimination
AE	Adverse event
ALT	Alanine aminotransferase
API	Active pharmaceutical ingredient
AST	Aspartate aminotransferase
ATC	Anatomical Therapeutic Chemical Classification System
AUC	Area under the plasma concentration-time curve
AUC <sub>0-24h</sub>	Area under the plasma concentration-time curve for the 24-hour dosing interval
CI	Confidence interval
C <sub>max</sub>	Maximum observed plasma/serum concentration of drug
CYP	Cytochrome P450
DDI	Drug-drug interaction
EMA	European Medicines Agency
ERA	Environmental risk assessment
FDA	Food and Drug Administration (USA)
GI	Gastrointestinal
GLP	Good Laboratory Practice
HPLC	High-performance liquid chromatography
IC/EC <sub>50</sub>	Half-maximal inhibitory/effective concentration
ICH	International Council for Harmonisation
Ig	Immunoglobulin
INN	International non-proprietary name
ITT	Intention-to-treat
LoQ	List of Questions
MAH	Marketing authorisation holder
Max	Maximum
Min	Minimum
MRHD	Maximum recommended human dose
N/A	Not applicable
NO(A)EL	No observed (adverse) effect level
PBPK	Physiology-based pharmacokinetics
PD	Pharmacodynamics
PIP	Paediatric investigation plan (EMA)
PK	Pharmacokinetics
PopPK	Population pharmacokinetics
PSP	Pediatric study plan (US FDA)
RMP	Risk management plan
SAE	Serious adverse event
SwissPAR	Swiss Public Assessment Report
TEAE	Treatment-emergent adverse event
TPA	Federal Act of 15 December 2000 on Medicinal Products and Medical Devices (SR 812.21)
TPO	Ordinance of 21 September 2018 on Therapeutic Products (SR 812.212.21)

## 2 Background information on the procedure

### 2.1 Applicant's request(s) and information regarding procedure

#### **New active substance status**

The applicant requested new active substance status for clesrovimabum in the above-mentioned medicinal product.

#### **Work-sharing procedure**

The applicant requested a work-sharing procedure with Australia, Canada, and Singapore. The Access NAS (new active substance) work-sharing initiative is a collaboration between regulatory authorities – specifically Australia's Therapeutic Goods Administration (TGA), Health Canada (HC), Singapore's Health Sciences Authority (HSA), the UK Medicines & Healthcare products Regulatory Agency (MHRA) and Swissmedic – and the pharmaceutical industry. The work-sharing initiative involves the coordinated assessment of NAS applications that have been filed in at least two jurisdictions.

### 2.2 Indication and dosage

#### 2.2.1 Requested indication

Enflonsia is indicated for the prophylaxis of respiratory syncytial virus (RSV) lower respiratory tract disease in neonates and infants born before or during their first RSV season. Enflonsia should be used in accordance with official recommendations.

#### 2.2.2 Approved indication

Enflonsia is indicated for the prophylaxis of respiratory syncytial virus (RSV) lower respiratory tract disease in neonates and infants born before or during their first RSV season. Enflonsia should be used in accordance with official recommendations.

#### 2.2.3 Requested dosage

#### **Summary of the requested standard dosage:**

The recommended dosage is 105 mg administered as a single intramuscular injection of 0.7 ml.

#### 2.2.4 Approved dosage

(see appendix)

### 2.3 Regulatory history (milestones)

Application	28 February 2025
Formal control completed	28 March 2025
List of Questions (LoQ)	27 May 2025
Response to LoQ	11 June 2025
Second List of Questions (LoQ)	25 July 2025

Third List of Questions (LoQ)	25 August 2025
Response to second LoQ	22 September 2025
Third List of Questions (LoQ)	25 August 2025
Response to third LoQ	8 September 2025
Preliminary decision	7 November 2025
Response to preliminary decision	21 November 2025
Labelling corrections and/or other aspects	9 December 2025
Response to labelling corrections and/or other aspects	18 December 2025
Final decision	22 January 2026
Decision	approval

### 3 Quality aspects

Swissmedic has not assessed the primary data relating to quality aspects submitted with this application and relies on the assessment of the foreign reference authority, Australia's TGA (see section 2.1 Applicant's request / Work-sharing procedure).

### 4 Nonclinical aspects

Swissmedic has not assessed the primary data relating to nonclinical aspects submitted with this application and relies on the assessment of the foreign reference authority, Singapore's HSA (see section 2.1 Applicant's request / Work-sharing procedure).

### 5 Clinical aspects

Swissmedic has not assessed the primary data relating to clinical aspects submitted with this application and relies on the assessment of the foreign reference authority Health Canada (see section 2.1 Applicant's request / Work-sharing procedure).

### 6 Risk management plan summary

The RMP summaries contain information on the medicinal products' safety profiles and explain the measures that are taken to further investigate and monitor the risks, as well as to prevent or minimise them.

The RMP summaries are published separately on the Swissmedic website. It is the responsibility of the marketing authorisation holder to ensure that the content of the published RMP summaries is accurate and correct. As the RMPs are international documents, their summaries might differ from the content in the Information for healthcare professionals / product information approved and published in Switzerland, e.g. by mentioning risks that occur in populations or indications not included in the Swiss authorisations.

## 7 Appendix

### Approved Information for healthcare professionals

Please be aware that the following version of the Information for healthcare professionals for Enflonsia was approved with the submission described in the SwissPAR. This Information for healthcare professionals may have been updated since the SwissPAR was published.

Please note that the valid and relevant reference document for the effective and safe use of medicinal products in Switzerland is the Information for healthcare professionals currently authorised by Swissmedic (see [www.swissmedicinfo.ch](http://www.swissmedicinfo.ch)).

#### **Note:**

The following Information for healthcare professionals has been translated by the MAH. It is the responsibility of the authorisation holder to ensure the translation is correct. The only binding and legally valid text is the Information for healthcare professionals approved in one of the official Swiss languages.

▼ This medicinal product is subject to additional monitoring. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected new or serious adverse reactions. See the "Undesirable effects" section for advice on the reporting of adverse reactions.

### **NAME OF THE MEDICINAL PRODUCT**

Enflonsia®

### **Composition**

#### *Active substances*

Clesrovimab (fully human immunoglobulin G1 kappa (IgG1<sub>κ</sub>) monoclonal antibody produced in recombinant Chinese hamster ovary (CHO) cells).

#### *Excipients*

Sucrose, L-arginine hydrochloride, L-histidine monohydrochloride monohydrate, L-histidine, polysorbate 80 (E433) and water for injection.

### **Pharmaceutical form and active substance quantity per unit**

Solution for intramuscular injection in pre-filled syringe.

Clear to slightly opalescent, colorless to slightly yellow solution.

Each pre-filled syringe contains 105 mg of clesrovimab in 0.7 mL.

### **Indications/Uses**

Enflonsia is indicated for the prophylaxis of respiratory syncytial virus (RSV) lower respiratory tract disease in neonates and infants born before or during their first RSV season.

Enflonsia should be used in accordance with official recommendations.

### **Dosage/Administration**

#### *Posology*

#### *Neonates and Infants: First RSV Season*

The recommended dose is 105 mg administered as a 0.7 mL single intramuscular (IM) injection.

For neonates and infants born during the RSV season, administer Enflonsia starting from birth.

For infants born outside the RSV season, administer Enflonsia once prior to the start of their first RSV season considering the duration of protection provided by Enflonsia (see section "Properties/Effects").

The dosage in infants with a body weight of < 1.1 kg and a postmenstrual age (gestational age (GA) at birth plus chronological age) of less than 31 weeks is based on extrapolation, no clinical data are available.

Limited data are available for extremely preterm infants (gestational age <29 weeks) who are of chronological age less than 8 weeks old.

In infants < 1.1 kg higher exposures are to be expected than in children with a higher bodyweight. The benefits and risks of using clesrovimab in infants <1.1 kg should be carefully considered.

### *Infants Undergoing Cardiac Surgery with Cardiopulmonary Bypass*

For infants undergoing cardiac surgery with cardiopulmonary bypass during the first RSV season, an additional 105 mg dose is recommended as soon as the infant is stable after surgery to ensure adequate clesrovimab serum levels.

### *Paediatric use*

The safety and efficacy of Enflonsia have not yet been established in children older than 12 months of age.

### *Traceability*

In order to improve the traceability of biological medicinal products, the name and the batch number of the administered product should be clearly recorded.

### *Method of administration*

For intramuscular use only.

The medicinal product should be administered intramuscularly by a healthcare professional, in the anterolateral aspect of the thigh. It should not be injected in the gluteal area or areas where there may be a major nerve trunk and/or blood vessel.

Refer to section "Other information" for instructions on handling and administration.

## **Contraindications**

Enflonsia is contraindicated in infants with a history of serious hypersensitivity reactions, including anaphylaxis, to any component of Enflonsia (see sections "Warnings and precautions", "Composition").

## **Warnings and precautions**

### *Hypersensitivity Including Anaphylaxis*

Serious hypersensitivity reactions, including anaphylaxis, have been observed with other human immunoglobulin G1 (IgG1) monoclonal antibodies. If signs and symptoms of a clinically significant hypersensitivity reaction or anaphylaxis occur, initiate appropriate medications and/or supportive therapy.

### *Use in individuals with clinically significant bleeding disorders*

As with any other i.m. injections, Enflonsia should be given with caution to infants with thrombocytopenia, any form of coagulation disorder or to infants undergoing anticoagulation therapy.

### *Protection*

Enflonsia may not protect everyone who receives this monoclonal antibody from lower respiratory tract disease caused by respiratory syncytial virus.

### **Interactions**

Since clesrovimab is eliminated by catabolism, no metabolic drug-drug interactions are expected. However, no formal drug interaction studies have been performed.

### *Interference with RT-PCR or Rapid Antigen Detection RSV Diagnostic Assays*

Enflonsia may interfere with some immunologically-based RSV diagnostic assays (i.e., rapid antigen tests) as observed in laboratory studies. Confirmation using a reverse transcriptase polymerase chain reaction (RT-PCR) assay is recommended when rapid antigen assay results are negative and clinical observations are consistent with RSV infection. Enflonsia does not interfere with RT-PCR diagnostic assays.

### *Concomitant administration with Childhood Vaccines and Immunoglobulin Products*

Enflonsia can be given concomitantly with childhood vaccines. Since Enflonsia is a monoclonal antibody, a passive immunisation specific for RSV, it is not expected to interfere with the active immune response to co-administered vaccines.

In clinical studies, when Enflonsia was given concomitantly with routine childhood vaccines, the safety profile of the co-administered regimen was generally comparable to the safety profile when Enflonsia and childhood vaccines were administered alone.

When Enflonsia is administered concomitantly with injectable vaccines, it should be given using a separate syringe and at a different injection-site. It should not be mixed with any vaccines or medications in the same syringe or vial (see section “Incompatibilities”).

There are no data regarding substitution of clesrovimab for palivizumab once prophylaxis treatment is initiated with palivizumab for the RSV season.

### **Pregnancy, lactation**

#### *Pregnancy*

Not applicable.

#### *Lactation*

Not applicable.

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

Not applicable.

**Undesirable effects**

*Summary of safety profile*

The most frequent adverse reactions were injection site erythema (4.4%) and injection site swelling (3.2%), which were solicited daily within 5 days post dose. Additionally, rash was reported in 2.3% of participants within 14 days post dose. Most (> 96%) of the adverse reactions were mild or moderate.

*Tabulated list of adverse reactions*

Safety was evaluated in 2 854 infants who received Enflonsia in phase 2b/3 and phase 3 clinical studies (Protocol 004 and Protocol 007, respectively) (see section “Properties/Effects”).

*Neonates and Infants Entering Their First RSV Season (Protocol 004)*

Table 1 presents the adverse reactions reported in 2 409 preterm and full term infants (GA ≥ 29 weeks) who received Enflonsia.

Adverse reactions reported with Enflonsia are listed by MedDRA system organ class and in decreasing order of frequency. Frequencies are defined as very common (≥ 1/10), common (≥ 1/100 to < 1/10), uncommon (≥ 1/1 000 to < 1/100), rare (≥ 1/10 000 to < 1/1 000), and very rare (< 1/10 000) and not known (cannot be estimated from available data).

Table 1: Adverse Reactions

<b>System organ class</b>	<b>Adverse reaction</b>	<b>Frequency</b>
Skin and subcutaneous tissue disorders	Rash*	Common
General disorders and administration site conditions	Injection-site erythema <sup>†</sup>	Common
	Injection-site swelling <sup>†</sup>	Common

\*Rash was defined by the following grouped preferred terms: rash, rash erythematous, rash papular, rash maculo papular, rash vesicular, dermatitis allergic, and drug eruption

<sup>†</sup>Solicited on Day 1 through Day 5 post dose

*Infants at Increased Risk of Severe RSV Disease Entering Their First RSV Season (Protocol 007)*

Safety was evaluated in 895 infants at increased risk of severe RSV disease. Participants received Enflonsia (N=445) or palivizumab (N=450). Of the 445 participants who received Enflonsia, 175 had chronic lung disease (CLD) of prematurity or hemodynamically significant congenital heart disease (CHD) and 270 were early or moderate preterm infants (≤35 weeks GA) without CLD of prematurity or CHD.

The safety profile of Enflonsia in infants at increased risk of severe RSV disease entering their first season is generally comparable to palivizumab and consistent with the safety profile of Enflonsia in infants in Protocol 004.

Reporting suspected adverse reactions after authorisation of the medicinal product is very important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions online via the EIVIS portal (Electronic Vigilance System). You can obtain information about this at [www.swissmedic.ch](http://www.swissmedic.ch).

### Overdose

There is limited experience of overdose with Enflonsia. There is no specific treatment for an overdose with Enflonsia. In the event of an overdose, the individual should be monitored for the occurrence of adverse reactions and provided with symptomatic treatment as appropriate.

### Properties/Effects

*ATC code*

J06BD10

*Mechanism of action*

Clesrovimab is a recombinant, RSV neutralizing, human immunoglobulin G1 kappa (IgG1 $\kappa$ ) monoclonal antibody with a triple amino acid substitution (YTE) in the Fc region which increases binding to the neonatal Fc receptor leading to an extended serum half-life. Clesrovimab provides passive immunity by targeting the RSV outer membrane fusion (F) protein to prevent viral entry into cells.

Clesrovimab binds to a conserved epitope on antigenic site IV on the fusion F protein. Clesrovimab binds to RSV pre-fusion F glycoprotein and post-fusion F glycoprotein with equilibrium dissociation constant values (KD) of 71 pM and 480 pM, respectively.

*Pharmacodynamics*

RSV serum neutralizing antibody titer correlates with clesrovimab serum concentration. Following IM administration of clesrovimab in infants, the RSV neutralizing antibody titers in serum were estimated to be approximately 7 times higher than baseline at 4 hours after clesrovimab dosing, and maximum titers were reached at approximately 7 days, for an infant weighing 5 kg.

*Antiviral Activity*

An *in vitro* infection neutralization assay was used to determine clesrovimab potency against RSV strains A and B using HEp-2 cells. In the laboratory, clesrovimab neutralized RSV strain A and B with an IC<sub>50</sub>  $\pm$  SD of 6.0  $\pm$  4.3 and 3.0  $\pm$  2.0 ng/mL, respectively. Clesrovimab was assessed for its ability to neutralize 47 RSV clinical isolates using a similar *in vitro* assay, with IC<sub>50</sub> values ranging from 0.18 ng/mL to 11.11 ng/mL for RSV A and 0.58 ng/mL to 29.65 ng/mL for RSV B. The clinical isolate panel consisted of a broad range of clinical RSV isolated between years 1987 and 2016. Recent clinical isolates (RSV A and RSV B) from 2016 through 2021 were equipotently neutralized by clesrovimab as compared to the reference RSV strains.

### *Antiviral Resistance*

#### *In Cell Culture*

Monoclonal antibody-resistant viral mutants (MARMs) were identified after serial infection in cell culture of RSV A or RSV B. Four RSV strain A MARMs for clesrovimab were generated after 6 rounds of serial infection. The 4 MARM viruses were subjected to an additional 3 rounds of serial infection prior to being processed for characterization. The four RSV A MARMs were sequenced and found to have mutations located in the binding epitope region reported for clesrovimab, G446E, S443P and K445N, S443P and G446E, or S443P. An *in vitro* assay confirmed that clesrovimab was not able to neutralize the 4 MARMs. One RSV B MARM was identified after 9 rounds of serial infection. The RSV B MARM was found to have a mutation located in the binding epitope region reported for clesrovimab, S443P.

#### *In Surveillance Studies*

In sequences reported in the GenBank database, the RSV binding epitope for clesrovimab was highly conserved (99.8%). Thirteen (13) clesrovimab epitope variants were identified, including the most common variant, I432T, identified in 5 RSV A and 1 RSV B samples (0.04%), which reduced the clesrovimab neutralizing activities by 4 times (RSV A) and 1.6 times (RSV B). Two RSV A MARMs were identified with a mutation at position 446 (G446E). This mutation was found in 3 GenBank variant RSV A F sequences (0.02%) in the database.

Viral growth kinetics were assessed on HEp-2 cells for the RSV A variant carrying the G446E resistance-associated substitution and the data suggest slower *in vitro* growth kinetics compared to the wild type RSV A laboratory strain.

In a global surveillance study conducted between 2019 and 2023 in 8 countries of the Northern and Southern Hemispheres, the clesrovimab binding site was highly conserved (100%) in 555 RSV-positive, sequenced clinical samples: 300 RSV A (54%) and 255 RSV B (46%) from individuals of various ages.

#### *In Clinical Studies*

Viral phenotypic testing of RSV-positive nasal swabs demonstrated that the majority of the clesrovimab binding site (IV) substitutions affected residue G446, resulting in the following substitutions: G446E, G446R or G446W (RSV A) and G446E or G446R (RSV B). At  $\geq 10\%$  variant allele frequency (VAF) in Protocol 004, the substitutions G446E, G446R and G446W were detected in the clesrovimab arm and 1 substitution (K433T) in the placebo arm. All of the above substitutions occurred at a population frequency of  $< 1\%$ . In Protocol 007, the following substitutions were detected at  $\geq 10\%$  VAF: G446W (RSV A), and G446E and G446R (RSV B), in the clesrovimab arm. Three resistance-associated substitutions were detected during the 180-day efficacy time period: G446E and G446W conferring  $> 2,941$ -fold (RSV A) or  $> 1,299$ -fold (RSV B) loss of susceptibility to

clesrovimab, and G446R conferring >1,563-fold (RSV A) loss of susceptibility to clesrovimab (RSV B not assessed).

In Protocol 004, there was one case of RSV-associated hospitalization (RSV A) with the G446W substitution, and in Protocol 007 there was one case of RSV-associated severe MALRI (RSV B) and hospitalization with the G446R substitution during the 150-day efficacy period.

### *Cross-Resistance*

No cross-resistance was seen for RSV variants harbouring palivizumab or nirsevimab resistance-associated substitutions identified in cell culture neutralization assays.

Clesrovimab did not lose activity against RSV A or RSV B clinical isolates with palivizumab resistance-associated substitution N262Y, or recombinant RSV B with nirsevimab resistance-associated substitutions N208S, I64T+K68E, or I64T+K68E+I206M+Q209R, which were observed in clinical trials of nirsevimab. Not all nirsevimab resistance-associated substitutions have been assessed for cross-resistance with clesrovimab.

Both nirsevimab and palivizumab neutralized RSV A and RSV B variants harboring clesrovimab resistance-associated substitutions G446E or G446W in cell culture.

### *Clinical efficacy*

The efficacy and safety of Enflonsia were evaluated in preterm and full-term infants in two clinical studies, Protocol 004 and Protocol 007.

### *Efficacy against RSV associated MALRI and hospitalisation in neonates and infants with GA $\geq$ 29 weeks entering their first RSV season (Protocol 004)*

Protocol 004 was a Phase 2b/3, randomised, double-blind placebo-controlled, multi-site trial conducted in 22 countries from the Northern and Southern hemispheres to evaluate the efficacy of Enflonsia in early and moderate preterm infants ( $\geq$  29 to < 35 weeks GA) and late preterm and full term infants ( $\geq$  35 weeks GA). The study assessed the efficacy of Enflonsia in the prevention of RSV-associated disease. Participants were randomised 2:1 to receive a 105 mg dose of Enflonsia (n=2 412, including 422 early and moderate preterm infants) or saline placebo (n=1 202, including 209 early and moderate preterm infants) by IM injection.

Among participants who received Enflonsia or saline placebo, the median age of infants was 3.1 months (range: 0 to 12 months); 79.9% were less than 6 months; 15.9% were greater than or equal to 6 to less than 9 months; 4.2% were greater than or equal to 9 months of age; and 51.1% were male. Of these participants, 17.5% were GA greater than or equal to 29 weeks and less than 35 weeks and 82.5% were GA greater than or equal to 35 weeks. The racial distribution was as follows: 45.2% were White; 26.6% were Asian; 13.8% were Black or African American; 12.2% were Multi-racial and 1.9% were American Indian or Alaska Native; 28.1% were of Hispanic or Latino ethnicity.

The primary endpoint was the incidence of RSV associated Medically Attended Lower Respiratory Infection (MALRI) characterised as cough or difficulty breathing and requiring  $\geq 1$  indicator of LRI (wheezing, rales/crackles) or severity (chest wall in-drawing/retractions, hypoxemia, tachypnoea, dehydration due to respiratory symptoms) through 150 days after dosing. Medically Attended (MA) includes all healthcare professional visits in settings such as outpatient clinic, clinical study site, emergency department, urgent care centre, and/or hospital. The statistical criterion for success required the lower bound of the 95% CI of efficacy to be greater than 25%.

RSV associated hospitalisations through 150 days after dosing were also evaluated as secondary endpoints. For RSV associated hospitalisations through 150 days, the statistical criterion for success required the lower bound of the 95% CI of efficacy to be greater than 0%.

The efficacy endpoints required an RSV positive RT PCR nasopharyngeal (NP) sample.

Table 2 displays the efficacy results for RSV associated disease in preterm and full term infants from Days 1 through 150 post dose.

Table 2: Incidence of RSV associated disease in preterm and full term infants Days 1 through 150 Post dose (Protocol 004)

RSV-Associated Endpoint	Enflonsia (n=2 398)		Placebo (n=1 201)		Estimated Efficacy (%) (95% CI)* (one-sided p-value)
	Number of cases	Incidence rate over 5 months	Number of cases	Incidence rate over 5 months	
MALRI (requiring $\geq 1$ indicator of LRI or severity)	60	0.026	74	0.065	60.4% (44.1, 71.9) (p < 0.001)
Hospitalisation	9	0.004	28	0.024	84.2% (66.6, 92.6) (p < 0.001)

n=Number in the full analysis set population. CI: Confidence Interval

\* The efficacy was defined as  $100 \times (1 - \text{relative risk (Enflonsia vs. placebo)})$ . Efficacy estimates and corresponding 95% CIs of efficacy were obtained using the modified Poisson regression model with robust variance. The models were adjusted for hemisphere, gestational age group, and age group at randomization for RSV-associated MALRI and hospitalization.

In a descriptive analysis through 180 days after dosing, the estimated efficacy against RSV-associated MALRI (requiring  $\geq 1$  indicator of LRI or severity) was 59.5% (95% CI: 43.3, 71.1).

*Efficacy against RSV associated MALRI and hospitalisation in infants at increased risk of severe RSV disease entering their first RSV season (Protocol 007, established by extrapolation, see section “Pharmacokinetics”)*

Protocol 007 is a phase 3, randomised, partially blind, palivizumab controlled, multi-site trial conducted in 27 countries from the Northern and Southern hemispheres to evaluate the efficacy of Enflonsia in early (< 29 weeks GA) or moderate preterm infants ( $\geq 29$  to  $\leq 35$  weeks GA), and infants with chronic lung disease of prematurity or congenital heart disease of any GA, who are at increased risk for severe RSV disease. Participants were randomised to receive Enflonsia or palivizumab by IM injection. Participants randomised to Enflonsia received a single 105 mg dose on Day 1 followed by a dose of placebo one month later; palivizumab was administered on Day 1 and every month thereafter for a total of 3 to 5 doses.

Among participants who received Enflonsia or palivizumab, the median age of infants was 2.5 months (range: 0 to 12 months); 89.2% were less than 6 months; 9.4% were greater than or equal to 6 to less than 9 months; 1.5% were greater than or equal to 9 months of age; and 49.8% were male. Of these participants, 27.9% had CLD, 11.3% had CHD, 5.6% were GA less than 29 weeks with neither CLD nor CHD and 55.2% were GA greater than or equal to 29 weeks with neither CLD nor CHD. The racial distribution was as follows: 52.2% were White; 18.1% were Asian; 15.4% were Black or African American; 12.2% were Multi-racial, and 1.3% were American Indian or Alaska Native; 31.7% were of Hispanic or Latino ethnicity.

The efficacy of Enflonsia in infants at increased risk for severe RSV disease, including preterm infants and infants with chronic lung disease of prematurity or congenital heart disease, was established by extrapolation of efficacy of Enflonsia from Protocol 004 to Protocol 007 based on similar pharmacokinetic exposure (see section “Pharmacokinetics”). In Protocol 007, the incidence rate of RSV associated MALRI (requiring  $\geq 1$  indicator of LRI or severity) through 150 days after dosing was generally comparable between Enflonsia (incidence rate=3.6%, 95% CI: 2.0, 6.0) and palivizumab (incidence rate=3.0%, 95% CI: 1.6, 5.3). The incidence rate of RSV associated hospitalisation through 150 days after dosing was generally comparable between Enflonsia (incidence rate=1.3%, 95% CI: 0.4, 3.0) and palivizumab (incidence rate=1.5%, 95% CI: 0.6, 3.3).

### *Immunogenicity*

The observed incidence of anti-drug antibodies (ADA) is highly dependent on the sensitivity and specificity of the assay. Differences in assay methods preclude meaningful comparisons of the incidence of ADA in the studies described below with the incidence of ADA in other studies.

In Protocol 004 and Protocol 007, 12.0% (124/1033) and 13.0% (34/261) of participants were ADA-positive through Day 240, respectively.

There was no identified impact of ADA on pharmacokinetics, RSV serum neutralising activity, efficacy or safety of TRADEMARK during RSV season 1.

### *Duration of Protection*

Based on clinical data, the duration of protection after a single dose of Enflonsia is at least 5 to 6 months.

### **Pharmacokinetics**

The pharmacokinetic (PK) of clesrovimab is approximately dose-proportional following a single IM administration of doses ranging from 20 mg to 210 mg in infants. Following the recommended dose in the first RSV season, the clesrovimab serum exposures were similar in neonates and infants in Protocol 004, in preterm neonates and infants born at less than or equal to 35 weeks GA (including less than 29 weeks GA) in Protocol 007, and in neonates and infants with CLD or CHD in Protocol 007.

### *Absorption*

The estimated clesrovimab absolute bioavailability is 77.8% and the median (range) time to maximum concentration is 6.5 (4.7, 11.0) days.

### *Distribution*

The estimated apparent volume of distribution for clesrovimab is 830 mL, for a typical infant weighing 5 kg.

Clesrovimab was readily detected in the nasal mucosa of sampled adult participants. The concentration of clesrovimab measured in the epithelial lining fluid of the nasal mucosa was 1.4% to 3.3% of the concentration measured in the serum.

### *Elimination*

The clesrovimab terminal half-life is approximately 44.0 days and the estimated apparent clearance is 19.7 mL/day for a typical infant weighing 5 kg.

### *Metabolism*

Clesrovimab is degraded into small peptides by catabolic pathways.

### *Kinetics in specific patient groups*

No clinically significant differences in the pharmacokinetics of clesrovimab were observed based on race or vulnerability to severe RSV disease (i.e., CLD, CHD, or GA <29 weeks). No clinical studies

have been conducted to investigate the effect of renal or hepatic impairment. An effect of renal or hepatic impairment on clesrovimab pharmacokinetics is not expected.

### **Preclinical data**

Based on conventional studies on toxicity following repeated administration in rats and tissue cross-reactivity studies with human tissues, including juvenile and neonatal tissues, the preclinical data do not indicate any particular risks for humans. Since clesrovimab is a monoclonal antibody, no studies on genotoxicity, carcinogenicity, or reproductive toxicity have been conducted.

### **Other information**

#### *Incompatibilities*

In the absence of compatibility studies, this medicinal product must not be mixed with other medicinal products.

#### *Shelf life*

Do not use this medicine after the expiry date marked as "EXP" on the pack.

#### *Special precautions for storage*

Store in a refrigerator (2 °C – 8 °C). Do not freeze.

Keep the pre-filled syringe in the outer carton to protect from light until time of use.

Do not shake.

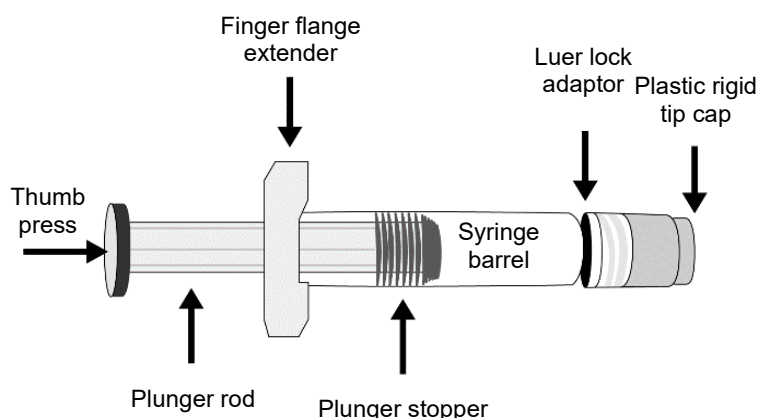
Enflonsia may be kept at room temperature (20 °C - 25 °C) for a maximum 48 hours. After removal from the refrigerator, it must be used within 48 hours or discarded.

Keep out of the reach of children.

#### *Instructions for handling*

Before injection, remove Enflonsia from the refrigerator and allow the prefilled syringe to come to room temperature for approximately 15 minutes. Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration. Enflonsia is a clear to slightly opalescent, colorless to slightly yellow solution. This product should not be used if particulate matter or discoloration is found. Do not use if the prefilled syringe has been dropped or damaged, the security seal on the carton has been broken, or the expiration date has passed. Refer to Figure 1 for prefilled syringe components.

Figure 1: Pre-filled syringe components



**Step 1:** Hold the syringe barrel in one hand and unscrew the tip cap by twisting it counter-clockwise with the other hand. Do not remove the Luer lock adaptor and the finger flange extender.

**Step 2:** Attach a sterile Luer lock needle by twisting in a clockwise direction until the needle fits securely on the syringe. Due to the viscosity of the product, use a 25 gauge or larger needle.

**Step 3:** Inject the entire contents of the Enflonsia pre-filled syringe intramuscularly, in the anterolateral aspect of the thigh. Enflonsia should not be injected in the gluteal area or areas where there may be a major nerve trunk and/or blood vessel.

Enflonsia is for single use only. Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

### Authorisation number

70145

### Packs

Pack sizes of 1 pre-filled syringe with 2 separate needles or 10 pre-filled syringes without needles. 0.7 mL solution in pre-filled syringe (Type I glass) with a plunger stopper (latex-free rubber) and a tip cap (synthetic rubber; not made with natural latex) with or without needles. [A]

### Marketing authorisation holder

MSD Merck Sharp & Dohme AG  
Lucerne

### Date of revision of the text

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