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PRODUCT DATA SHEET

FOR TRANSFERBIOME MTT CAPSULES

1. Name of Product, General Information

1.1 Name of Product

TransferBiome

1.2 Full Name of Product

TransferBiome standardized intestinal microbiota graft for MTT

1.3 Product variations

TransferBiome 30(V) and TransferBiome 60(V): The Arabic numeral (30 or 60) indicates the number of capsules in the package, while the Roman numeral (V) represents the dosage level derived from the dry matter content of the lyophilized product.a homogenized mixture of raw materials collected over several days from the same donor.

1.4 Description

TransferBiome is an orally administered human microbiota transplantation (MTT) product offering a versatile solution for the effective treatment of chronic inflammatory bowel diseases (IBD) and other conditions associated with dysbiosis. The formulation supports the long-term balance of gut microbiota. TransferBiome is available exclusively to patients who have successfully undergone the required compatibility testing. For these patients, TransferBiome is dispensed from a dedicated batch assigned to their unique patient identifier. The product is manufactured in compliance with strict safety and efficacy standards, offering a reliable and effective solution for microbiota transfer therapy (MTT).

2. Scope of Use, Active Ingredients, Mechanism of Action

2.1 Indications

TransferBiome is intended for the effective treatment of chronic inflammatory bowel diseases (IBD) associated with gut bacterial imbalance or other conditions proven to be linked to dysbiosis. To achieve sustained improvement, it is recommended to perform microbiota compatibility testing using FindBiome capsules, which have an identical composition but a lower total dosage, prior to each administration. Based on the results of this procedure, a dedicated batch (LOT number) assigned to the patient’s unique identifier is reserved for the duration of the treatment. The selected batch (LOT number) can also be used as a “booster” therapy, if necessary, to support gut microbiota balance and reduce the risk of inflammatory flare-ups in high-risk patients.

2.2 Active Substance

TransferBiome contains a biologically active substance obtained from carefully screened human donors, specifically designed for use in microbiome transfer therapy. Its main component is a standardized suspension of human colon-derived microbiota in a lyophilized form, prepared in accordance with strict quality and safety guidelines.

2.3 Mechanism of action

The therapeutic effect of TransferBiome is achieved through a protocol known as "engraftment flooding." The treatment involves administering the product for 60 consecutive days, during which the recipient consumes a prescribed number of capsules daily. Each capsule contains a carefully filtered community of live gut microbes derived from healthy donors. During the prolonged administration, these external microorganisms gradually colonize the patient’s gastrointestinal tract, modifying the recipient's original microbiota. Successful treatment with TransferBiome

alleviates the burden on the intestinal wall by reducing the amount of inflammatory substances in the lumen through bacterial processing, allowing the intestinal wall to heal. This restructuring of the gut ecosystem promotes higher microbial diversity and stability, both of which are essential for maintaining intestinal homeostasis and mitigating inflammatory processes associated with dysbiosis.

3. Method of Use, Packaging, Storage, Dosage and Tapering

3.1 Method of use

- **Oral Administration**: TransferBiome capsules should primarily be taken orally without chewing or opening them, on an empty stomach, accompanied by plenty of fluids. Thirty minutes after taking the capsules, additional fluids should be consumed to ensure proper hydration and optimal absorption. Following this, other medications can be taken, and the regular daily routine may resume.
- ~~**Administration via Nasogastric Tube:** If necessary, the capsules can be opened, and their contents emulsified in a neutral liquid (e.g., water, cold tea, plain yogurt) for administration. For patients with nasogastric feeding tubes, the emulsion can be directly administered through the tube, ensuring effective delivery of the treatment.~~
- **Timing:** capsules should be taken first thing in the morning. Avoid simultaneous consumption with alcoholic beverages or hot liquids.

3.2 Packaging

- Dark Glass Containers: TransferBiome capsules are packaged in dark glass bottles to ensure effective protection from light and maintain product quality. This packaging is designed to preserve the viability of the microorganisms and ensure consistent therapeutic efficacy throughout the treatment period.
- **Each container holds 30 or 60 capsules, corresponding to 30 or 60 daily doses, referred to as a packaging unit. The exact administration protocol for TransferBiome is determined by the treating physician.**
- Moisture and Contaminant Control
    - Tamper-Evident Seal: Each container is equipped with a tamper-evident closure to safeguard product integrity and ensure it remains uncompromised.
    - Child-Resistant Closure: In compliance with local regulations, a child-resistant cap may be included to enhance safety and prevent unauthorized access. The product you ordered is equipped with a child-resistant closure if it is required by the regulations in your country.
- Labeling
    - The label clearly displays the product name, the number of capsules, the batch number, the expiration date and storage instructions for easy reference.
    - It includes a designated area for healthcare providers or pharmacists to record the dispensing date if required.

3.3 Storage

- **Room Temperature (up to 25°C / 77°F):** Store in the unopened, original packaging. The product remains stable for up to 3 months (90 days) when kept away from excessive heat and direct sunlight.
- **Refrigerated (+4°C to +8°C / 39–46°F):** When stored in a sealed, dark glass container, the product is stable for up to 12 months.
- **Deep Freeze (below –20°C / –4°F):** Properly sealed and protected from light, the product can be stored for up to 5 years.

- Handling Recommendations:
  - Ensure the container is tightly closed when not in use.
  - Store in an upright position to reduce the risk of capsule damage.
  - Minimize frequent opening and closing, as this may alter humidity levels inside the container.

3.4 Dosage

- **Standard Treatment Course:** The recommended regimen involves taking 1-2 capsules daily for a specified duration, typically for 60 days, depending on the treatment protocol.
- **Physician's Discretion:** The exact dosage and duration should be determined by the treating physician, customized to the patient's clinical status, medical history, and tolerance. The treatment is generally recommended to start with 2 capsules. If symptoms do not improve, the dosage may be increased by 1 capsule every 10 days. When exceeding a dosage of 5 capsules per day for a given batch (LOT), further improvement is unlikely, at which point it is advisable to repeat the compatibility testing.

3.5 Tapering

~~1.~~ **Gradual Discontinuation**: After the therapeutic application of TransferBiome, a gradual discontinuation protocol is always recommended. The initial daily dose should be tapered progressively. During the tapering process, it is advisable to reduce the daily dose by 1 capsule every other day (creating a 2-1-2-1 pattern). The next step involves omitting capsules every other day entirely (2-0-2-0), followed by halving the initial daily dose (1-0-1-0). Adjustments in dosing should occur in increments of 30 capsules. This approach ensures a smooth transition and gradual rebalancing.

2. **Clinical Monitoring:** Patients' conditions must be closely monitored during dose reduction to detect any recurrence of symptoms or the development of side effects. In the event of a relapse, the maximum daily dose should be reinstated, and the treatment protocol may be resumed. If symptoms persist despite adherence to the therapeutic protocol, it is strongly recommended to select a new batch (LOT).
3. **Follow-Up:** After completing the treatment (typically within 1–2 weeks following the last dose), it is recommended to conduct a follow-up assessment to evaluate the outcome of the therapy and determine the patient's recovery progress.

4. Advantages

4.1 Non-Invasive Delivery

Oral capsule administration provides a minimally invasive alternative to traditional MTT methods, such as colonoscopy or enema, reducing both patient discomfort and procedural risks.

4.2 High Efficacy

Clinical evidence and research prove that the use of TransferBiome can help restore and maintain a balanced gut microbiota, thereby reducing the occurrence and recurrence of symptoms and complications associated with chronic inflammatory bowel diseases and dysbiosis. The product's standardized microbiota graft effectively promotes microbial diversity, which is crucial for long-term intestinal health.

4.3 Ready-to-Use Therapy

TransferBiome is delivered as a fully prepared, rigorously tested product that can be directly administered by healthcare providers. It eliminates the need for in-house stool processing, donor screening, or complex MTT preparation steps, ensuring standardized, high-quality therapy while saving time and resources.

4.4 Convenience

Oral capsules are easy to store and administer, making them suitable for outpatient settings. This reduces logistical challenges for healthcare facilities and decreases dependence on specialized procedures. The capsule form significantly enhances patient adherence to therapy.

5. Pricing, Quantity Discounts, and Packaging Options

5.1 Pricing

The final price of TransferBiome may vary depending on distributor agreements and local regulations. For moderately severe conditions, the average treatment duration is 60 days following the compatibility test, without tapering. In severe cases, the treatment and/or tapering process may require a longer duration.

5.2 Quantity Discounts

Discounted rates may be available for bulk purchases, offering cost savings for larger orders.

5.3 Product Bundles

TransferBiome can be ordered in bundles containing a minimum of 30 or 60 capsules. Additional discounts based on packaging or volume may also be available, depending on the order size and distributor terms.

6. Additional Information

6.1 Donor Screening and Safety

- **Rigorous Screening:** Human microbiota of donors stool is meticulously screened according to applicable guidelines (e.g., EMA, WGO, EAGEN, or local health authority standards).
- **Comprehensive Testing:** Stringent microbiological, serological, and parasitological tests are performed to ensure the absence of infectious pathogens.
- **Quality Assurance:** The GMP-compliant manufacturing process includes multiple quality control checkpoints to ensure consistency and safety of the product.

6.2 Drug Interactions

- **Antibiotics:** Concurrent antibiotic use may diminish the efficacy of TransferBiome. It is recommended to complete antibiotic treatment at least 48 hours before starting TransferBiome therapy.
- **Probiotics:** Data on interactions between TransferBiome and probiotic supplements is limited. Avoid concurrent probiotic use during TransferBiome treatment unless advised by a healthcare provider.

6.3 Known Side Effects

- **Common and Mild:** Gastrointestinal discomfort, bloating, flatulence, diarrhea, or constipation. These effects are usually temporary and resolve without medical intervention.
- **Rare but Serious:** Infections or allergic reactions may occur and require close monitoring. Any significant or unusual symptoms should prompt immediate medical evaluation and reporting.

6.4 Warnings and Precautions

- **Immunocompromised Patients:** Patients with severe immunodeficiency or those on immunosuppressive therapy require close monitoring due to a higher risk of infection.
- **Pregnancy and Lactation:** Limited data is available; treatment should only be initiated after careful assessment by a healthcare provider.
- **Other Contraindications:** Patients with severe active gastrointestinal conditions (e.g., toxic megacolon, fulminant colitis) or suspected bloodstream infections should undergo thorough evaluation before initiating TransferBiome therapy.

7. Manufacturing Process and Quality Control

7.1 Donor Eligibility and Comprehensive Medical Evaluation

- **Thorough Pre-Donation Assessment:** All potential donors undergo a comprehensive medical evaluation before donation, including a detailed medical history, physical examination, and standard diagnostic tests. These ensure that any diseases or conditions transmissible via microbiota transfer are excluded to the best of current medical knowledge.
- **Dietary and Nutritional Requirements:** Donors adhere to a prescribed diet recommended by medical experts, including antibiotic-free animal proteins to support a stable, healthy microbiota. Regular medical evaluations are conducted to maintain the highest quality of donated material.

7.2 Serological Testing

- **Routine Screening:** Donors undergo at least two separate serological testing sessions 8 weeks apart to detect blood- and body-fluid-transmissible infections.
- **Tests Include:**
  - HIV 1–2 (Human Immunodeficiency Virus)
  - Hepatitis A, B, C, E
  - *Treponema pallidum* (syphilis)
  - Inflammatory markers in blood serum and stool
- **Eligibility:** Only donors with negative results across all repeated tests qualify for donation.

7.3 Microbiological Testing of the Donated Stool (Donatum)

- **Pathogen Screening:** Donated stool (“donatum”) is analyzed using multiplex PCR or conventional microbiological methods to detect enteric pathogens, including:
  - *Salmonella*, *Shigella*, *Yersinia*, *Campylobacter*
  - Enteropathogenic *E. coli* (EAEC, EPEC, ETEC, STEC, EIEC)
  - *Clostridioides* species
  - *Plesiomonas*, *Vibrio*
  - *Cryptosporidium*, *Cyclospora*, *Entamoeba histolytica*, *Giardia lamblia*
  - Adenovirus, Astrovirus, Norovirus, Rotavirus, Sapovirus, SARS-CoV-2
  - *Helicobacter pylori*

    - Multidrug-resistant organisms (MRSA, MRSE, VRE, ESBL, CRE)
- **Results:** Only donor samples confirmed to be free of the specified pathogens will be utilized in the final formulation of TransferBiome capsules.

7.4 Processing and Formulation

- After pathogen clearance, donor stool is processed into a bacterial suspension, lyophilized, and encapsulated using specialized pharmaceutical techniques to ensure microorganism viability and stability.

7.5 Excipients and Vitalization Additives

- To ensure optimal bacterial viability and support manufacturing integrity, each capsule contains:
    - Amylum solani (potato starch)
    - Inulin (chicory-derived)
    - Pyridoxal 5'-phosphate (vitamin B6)
    - Cyanocobalamin (vitamin B12)
    - Pteroil-monoglutamic acid (folic acid, vitamin B9)

These components have been selected to promote microbial stability, bacterial viability during storage, and ensure patient safety.

7.6 Batch (LOT) Identification and Documentation

- Each production batch is assigned a unique identifier tracking all related manufacturing data, including donor information, date of production, and raw material usage.
- Mandatory tests (e.g., microbiological purity checks, viable bacterial counts and active substance content) are performed according to predefined specifications prior to release.

7.7 Microbiological Testing and Contaminant Exclusion

- Regular microbiological screening (e.g., conventional culture methods, multiplex PCR) ensures the absence of contaminants or unintended pathogens.
- While the product is not manufactured under sterile conditions—given it contains live bacteria—a strict exclusion protocol is in place to rule out critical pathogens.
- Testing protocols follow strict local and international guidelines (e.g., EMA, WGO, EAGEN) for microbiological quality in biological products.

7.8 Excipients and Additional Components

- All excipients (e.g., *Amylum solani* [potato starch], inulin) and vitamin additives (B6, B12, folic acid) undergo rigorous quality checks to confirm purity, identity, and the absence of undesirable contaminants (e.g., heavy metals, residual solvents).
- Certificates of Analysis (CoA) from suppliers may be required, and spot checks or additional in-house testing can be performed to verify compliance with the relevant pharmacopeial or internal specifications.

7.9 Ongoing Quality Oversight

- Quality Assurance (QA) teams routinely audit production processes, documentation, and QC test results to ensure compliance with GMP standards.
- Any deviations or out-of-specification (OOS) results are thoroughly investigated, and corrective actions are implemented to maintain product integrity and regulatory compliance.

8. Special Populations

8.1 Elderly Patients

- Due to the potential for multiple comorbidities and concurrent medication use, TransferBiome should be used with caution in elderly patients, accompanied by closer monitoring for any adverse effects or interactions.

8.2 Pediatric Use

- Currently, TransferBiome is not indicated for patients under 18 years of age. Research is ongoing regarding MTT safety and efficacy in pediatric populations.

9. Additional Considerations and Regulatory Status

9.1 Regulatory Classification

TransferBiome is classified as a medical therapy (MTT) derived from substances of human origin. Classification by EU regulatory authorities is anticipated by the end of 2026.

9.2 Prescribing and Dispensing

TransferBiome should only be used under the supervision of a qualified healthcare professional. Its use may require compliance with specific protocols or special authorization, depending on regional and national regulations.

9.3 Pharmacovigilance and Reporting

Any suspected adverse reactions must be reported to the relevant health authority (e.g., FDA, EMA, or local regulatory agencies) in line with applicable national regulations.

Note: This datasheet is provided for informational purposes and is intended for healthcare professionals and patients. Always seek advice from a healthcare professional before starting any new treatment.

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