Takeda's legacy and commitment to plasma-based therapeutics

Takeda has a steadfast commitment to providing life-changing plasma-based therapeutics, with 70 years of experience and a robust approach to keep up with growing demand.

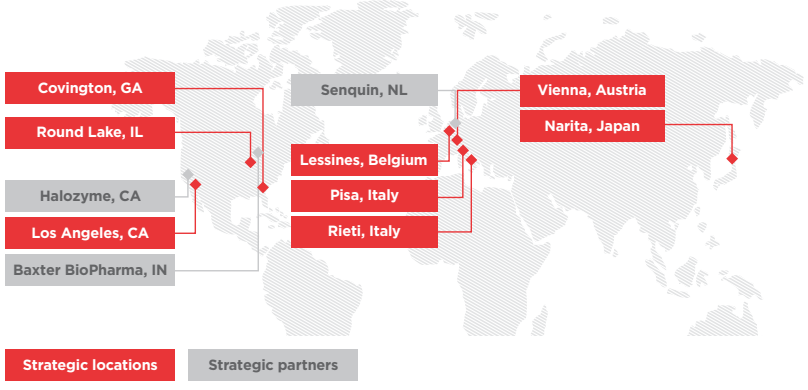
Manufacturing capacity increased by more than 65% in a 4-year period (2018-2022) and is expected to grow an additional 50% by 2028[1,2]

Collection

Takeda operates more than **220 BioLife collection centers across the US,** with the highest collection rate per center in the industry

Supply

8 strategic manufacturing locations and **4 strategic partners** provide a robust and uninterrupted global supply chain



Manufacturing Excellence

Takeda is consistently working to **build efficacies while maintaining safety** in their plasma-derived therapies (PDTs)

Yield

Takeda **makes the most of donations** through innovations and prioritizing the donor experience

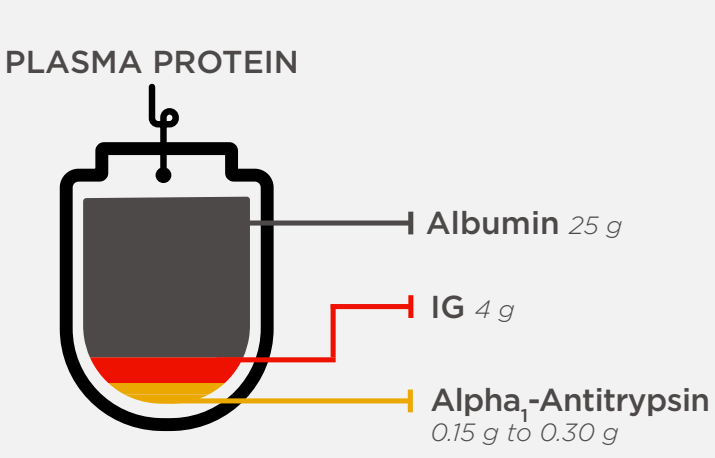
Lead Time

Producing PDTs takes months to years, compared to days to weeks for traditional pharmaceutical manufacturing

Plasma-derived therapies are challenging to source and time-intensive to produce.

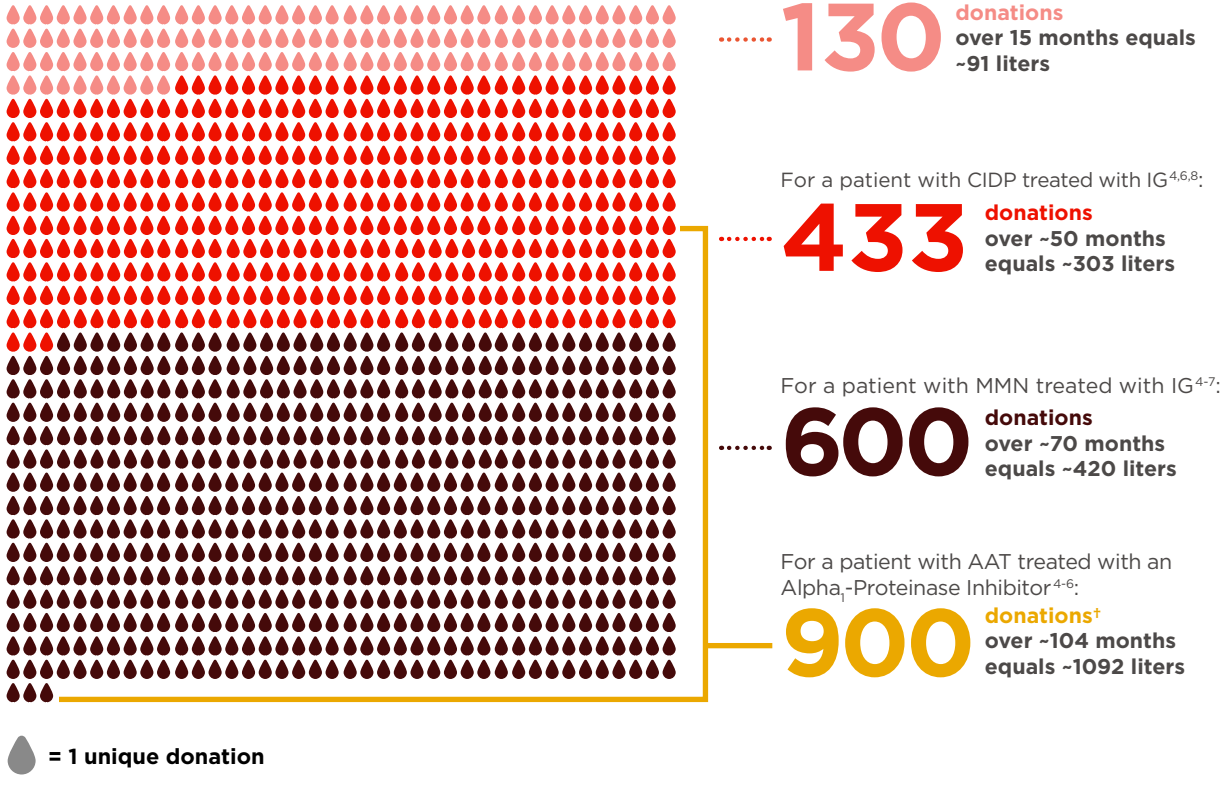
Only 7% of plasma contains vital proteins that can be used to treat certain conditions. 1% is salts, sugars, fats, hormones, and vitamins, and the remaining 92% is water.[3]

One liter of plasma yields[4]:



AAT=Alpha$_1$-antitrypsin deficiency; CIDP=chronic inflammatory demyelinating polyneuropathy; IG=immunoglobulin; MMN=multifocal motor neuropathy; PI=primary immunodeficiency.

To treat one adult patient for one year, hundreds of plasma donations are needed*:



Takeda's Manufacturing Facilities Employ Multiple Key Processes to Ensure IG Product Safety[6,9‡]

*Amounts indicate average yield per liter of plasma. Yields vary considerably according to manufacturing process. Calculations assume a dose of 0.4 g/kg every 4 weeks for an average adult of 70 kg with PI, a dose of 2 g/kg every month for an average adult of 70 kg with MMN, a dose of 1 g/kg every 3 weeks for an average adult of 70 kg with CIDP, and a dose of 60 mg/kg for an average adult of 70 kg with AAT.

†Alpha$_1$-antitrypsin can be derived from the same donations as IG.

‡Formulations made from human plasma may carry a risk of transmitting infectious agents, such as viruses and, theoretically, the Creutzfeldt-Jakob disease agent.

Takeda is committed to safety and consistency throughout the supply chain.

Plasma supply is driven by the relationship built with BioLife donors

- In 2022, BioLife centers in the US collected 23.5% more plasma than 2021[10]
- Industry-leading omnichannel engagement provides donors with a personalized experience with an AI "Success Coach," app, digital scheduling, and intuitive communications
- Centers are built around efficiency and convenience to provide donors with a positive experience

Plasma-based manufacturing steps

Plasma donation and screening

Qualified donors must pass 2 screenings within a 6-month period before their plasma donation can be accepted.[7,11]

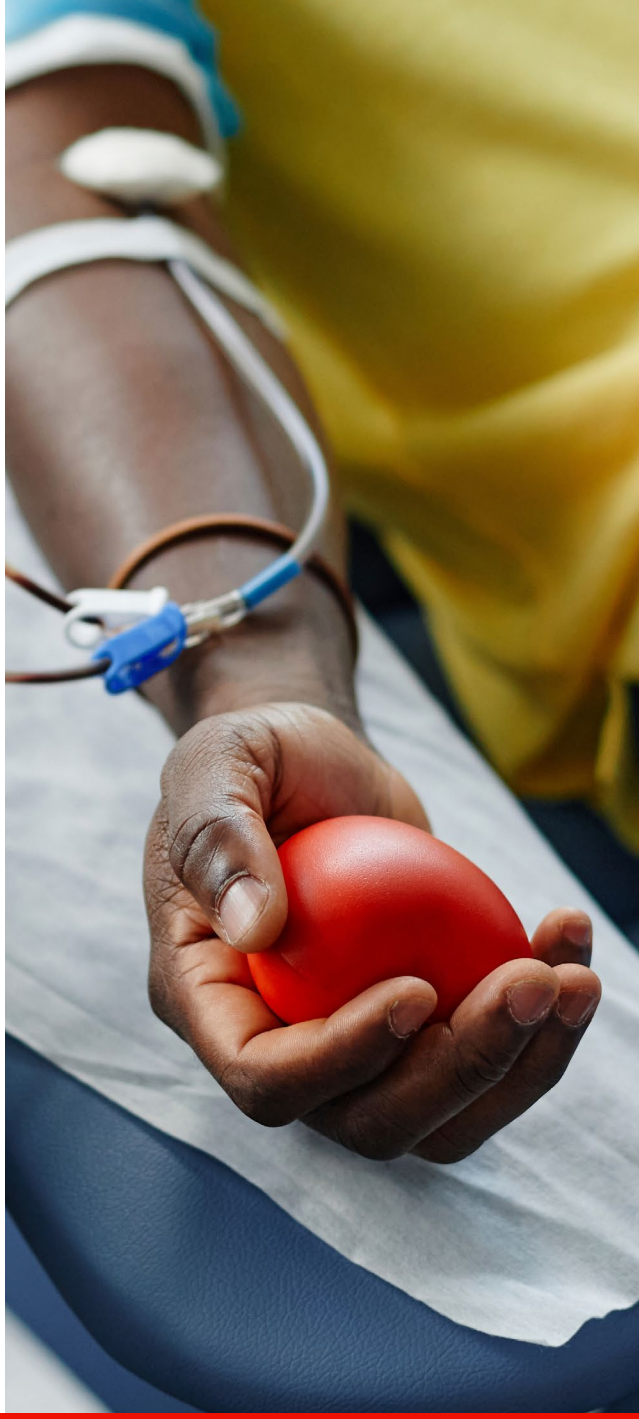
Fractionation

Plasma yields several products for various conditions, spreading the manufacturing effort across the various products.[7,12]

Purification, stabilization, and viral inactivation and removal

Purification, stabilization, and viral inactivation and removal are critical steps to help ensure product quality and safety.[13]

Final Product



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