

Drug Profile: Tirzepatide (Mounjaro / Zepbound)

1. Essential Information (Must-Have)

Drug Name: Tirzepatide

Brand Names: Mounjaro (Diabetes), Zepbound (Obesity)

Chemical Formula: C₂₂₅H₃₄₈N₄₈O₆₈

Molecular Weight: 4813.45 g/mol

Mechanism of Action: Dual GIP/GLP-1 Receptor Agonist. It mimics two incretin hormones to stimulate insulin, delay gastric emptying, and reduce appetite.

Therapeutic Class: Incretin Mimetic (Antidiabetic Agent)

Indications: Type 2 Diabetes Mellitus, Chronic Weight Management

2. Regulatory Information

FDA Approval: Approved (May 13, 2022 for Mounjaro; Nov 8, 2023 for Zepbound)

EMA Approval: Approved (Sep 15, 2022)

Patent Expiry (US): Jan 5, 2036 (Compound Patent US 9,474,780)

Regulatory Exclusivity: NCE Exclusivity until May 13, 2027

3. Clinical Performance Data (SURPASS Trials)

Trial	Treatment Arm	HbA1c Red.	Weight Loss
SURPASS-1	Tirzepatide 5 mg	-1.87%	-7.0 kg
SURPASS-1	Tirzepatide 15 mg	-2.07%	-9.5 kg
SURPASS-1	Placebo	+0.04%	-0.7 kg
SURPASS-2	Tirzepatide 5 mg	-2.01%	-7.6 kg
SURPASS-2	Tirzepatide 15 mg	-2.30%	-11.2 kg
SURPASS-2	Semaglutide 1 mg	-1.86%	-5.7 kg

4. Commercial & Market Data

Drug Profile: Tirzepatide (Mounjaro / Zepbound)

CAS Number: 2023788-19-2

Market Revenue: >\$30 Billion Annual Run Rate (Est. based on Q3 2024)

Key Competitors: Semaglutide (Ozempic, Wegovy)

Manufacturer: Eli Lilly and Company