

Mirabet[®]

(M i r a b e g r o n)

Extended Release Tablets

COMPOSITION

Mirabet Tablet 25 mg:

Each extended-release tablet contains:

Mirabegron 25 mg.

Product Specs.: Innovator

Mirabet Tablet 50 mg:

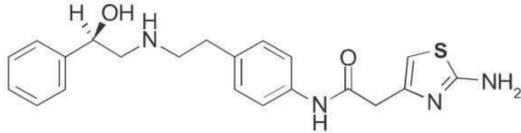
Each extended-release tablet contains:

Mirabegron 50 mg.

Product Specs.: Innovator

DESCRIPTION:

Mirabegron is a beta-3 adrenergic agonist. The chemical name is 2-(2-aminothiazol-4-yl)-N-[4-(2-[[{(2R)-2-hydroxy-2 phenylethyl] amino)ethyl]phenyl]acetamide having an empirical formula of C₂₁H₂₄N₄O₂S and a molecular weight of 396.51. The structural formula of mirabegron is:



CLINICAL PHARMACOLOGY:

Mechanism of Action:

Mirabegron is an agonist of the human beta-3 adrenergic receptor (AR). Mirabegron relaxes the detrusor smooth muscle during the storage phase of the urinary bladder fill-void cycle by activation of beta-3 AR which increases bladder capacity.

Pharmacokinetics:

Absorption: Peak at ~3.5 h; bioavailability 29% (25 mg) to 35% (50 mg); steady state achieved in 7 days; can be taken with or without food.

Distribution: Volume of distribution ~1670 L; 71% protein bound; also distributes to erythrocytes.

Metabolism: Multiple pathways; major inactive glucuronides.

Excretion: Half-life ~50 h; renal clearance ~13 L/h; 6–12% excreted unchanged in urine.

DRUG INTERACTIONS:

Effect of other drugs on mirabegron: Mirabegron is transported and metabolized through multiple pathways. Sulfonylurea hypoglycemic agents glibenclamide, gliclazide and tolbutamide do not affect the metabolism of mirabegron. Effect of mirabegron on other drugs: Mirabegron is a moderate and time-dependent inhibitor of CYP2D6 and a weak inhibitor of CYP3A4. Mirabegron did not induce CYP1A2 or CYP3A4.

INDICATIONS AND USAGE:

Mirabet is a beta-3 adrenergic agonist indicated for the:

- Treatment of overactive bladder (OAB) with symptoms of urge urinary incontinence, urgency, and urinary frequency.

DOSAGE AND ADMINISTRATION:

The recommended starting dose of Mirabet is 25 mg once daily with or without food. Mirabet 25 mg is effective within 8 weeks. Based on individual patient efficacy and tolerability the dose may be increased to 50 mg once daily.

Administration: Mirabet should be taken with water, swallowed whole and should not be chewed, divided, or crushed.

DOSE MODIFICATION RECOMMENDATIONS:

The daily dose of Mirabet should not exceed 25 mg once daily in the following populations:

Patients with severe renal impairment (CLCr 15 to 29 mL/min or eGFR 15 to 29 mL/min/1.73 m³). Patients with moderate hepatic impairment (Child-Pugh Class B). Mirabet is not recommended for use in patients with end stage renal disease (ESRD), or in patients with severe hepatic impairment (Child-Pugh Class C).

CONTRAINDICATIONS:

Mirabet is contraindicated in patients who have known hypersensitivity reactions to mirabegron or any component of the tablet.

WARNINGS AND PRECAUTIONS:

- Mirabet may increase blood pressure. Monitor periodically, especially in hypertensive patients. Not recommended in severe uncontrolled hypertension (SBP ≥180 mmHg and/or DBP ≥110 mmHg).

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- Use with caution in patients with bladder outlet obstruction (BOO) or those taking antimuscarinic drugs for OAB.
- Cases of angioedema (face, lips, tongue, larynx) have been reported. Discontinue Mirabet immediately if upper airway involvement occurs and initiate appropriate treatment.

DRUG INTERACTIONS:

- Mirabegron is a moderate CYP2D6 inhibitor. It increases exposure to CYP2D6 substrates (e.g., metoprolol, desipramine). Monitor and adjust doses, especially for drugs with a narrow therapeutic index (e.g., thioridazine, flecainide, propafenone).
- No adjustment needed with ketoconazole, rifampin, solifenacin, tamsulosin, or oral contraceptives.
- Mirabegron increases digoxin C_{max} (~29%) and AUC (~27%). Initiate digoxin at lowest dose and monitor serum concentrations for titration.
- Mirabegron increases warfarin C_{max} (~4%) and AUC (~9%), but has no significant effect on INR or prothrombin time.

USE IN SPECIFIC POPULATIONS:

Pregnancy:

Category C. Use only if potential benefit justifies risk to mother and fetus. Patients who become pregnant during therapy should consult their physician.

Nursing mothers: Not recommended during breastfeeding due to potential for serious adverse reactions in infants.

Pediatric use: Safety and effectiveness not established in patients under 18 years.

Geriatric use: No dose adjustment required. Pharmacokinetics not significantly influenced by age.

Renal impairment:

- Not recommended in ESRD (eGFR <15 mL/min/1.73 m² or hemodialysis).
- **Severe impairment (eGFR 15–29):** do not exceed 25 mg daily.
- **Mild to moderate impairment (eGFR 30–89):** no adjustment needed.

Hepatic impairment:

- Not recommended in severe impairment (Child-Pugh C).
- **Moderate impairment (Child-Pugh B):** do not exceed 25 mg daily.
- **Mild impairment (Child-Pugh A):** no adjustment needed.

ADVERSE REACTIONS:

The most frequent adverse events include:

- Nausea
- Common cold symptoms (nasopharyngitis)
- Urinary tract infection
- Headache
- Hypertension
- Diarrhea
- Constipation
- Dizziness
- tachcardia

Specific: Hypertension increased blood pressure.

Urologic: Urinary retention

Dermatologic: angioedema of the face, lips, tongue, and larynx, with or without respiratory symptoms.

OVERDOSAGE:

Overdose may cause palpitations, tachycardia (>100 bpm), and elevated systolic blood pressure. Management should be symptomatic and supportive, with monitoring of pulse rate, blood pressure, and ECG.

INSTRUCTIONS:

- Store below 30°C.
- Protect from heat, sunlight & moisture.
- Keep out of the reach of children.
- Swallow whole do not break, chew or crush the tablet.
- To be sold on the prescription of a registered medical practitioner only.

PRESENTATION:

Mirabet Tablet 25 mg : Pack of 2 x 10 tablets.
Mirabet Tablet 50 mg : Pack of 2 x 10 tablets.

Manufactured by:
CCL Pharmaceuticals (Pvt.) Ltd.
Plot No. 710, Sundar Industrial Estate, Raiwind Road Lahore, Pakistan.

FOR FURTHER INFORMATION PLEASE CONTACT:

 Manufactured for:
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62 Industrial Estate, Kot Lakhpat, Lahore, Pakistan.

ہدایات:

• ۳۰ درجہ سینٹی گریڈ سے کم درجہ حرارت پر رکھیں۔

گرمی، دھوپ اور نمی سے بچائیں۔

بچوں کی پہنچ سے دور رکھیں۔

گولی کو توڑے یا چبائے بغیر پانی سے نگل لیں۔

صرف مستند ڈاکٹر کے نسخہ پر فروخت کریں۔