Saudi Public Assessment Report

Relexib ®

Active Pharmaceutical Ingredient(s): Celecoxib

ATC code/CAS no.: M01AH01

Pharmaceutical/Dosage Form: Hard Capsule

Dosage Strength: 100 Mg-200 Mg

Marketing Authorization Holder: Saudi Pharmaceutical Industries

Shelf life: 36 Months.

Storage conditions: Store below 30°C.

Registration No.: 0712211431- 0712211430

Decision and Decision Date: Approved on 24/4/1443H

Table of Contents

1. Terms, Definitions, Abbreviations

Terms	Definitions
COX-2	Cyclooxygenase-2
C.I.	Confidence Interval
SFDA	Saudi Food and Drug Authority
SPC	Summary of Product Characteristics
SDI	Saudi Drug Information System
INN	International Nonproprietary Names
USAN	United States Adopted Names
GCC	Gulf Cooperation Council
GCP	Good Clinical Practice
GLP	Good Laboratory Practices

2. Background

2.1 Submission Details

Type of submission: Human Generic Drug

Reference product in SA: Celebrex

Pharmacological class: Non-steroidal anti-inflammatory and antirheumatic drugs.

Submitted Indication: Relexib is indicated in adults for the symptomatic relief in the treatment of osteoarthritis, rheumatoid arthritis and ankylosing spondylitis.

The decision to prescribe a selective cyclooxygenase-2 (COX-2) inhibitor should be based on an assessment of the individual patient's overall risks.

Submitted Dosage: 100 mg - 200 mg

2.2 Regulatory Background

This product is considered a human generic drug for Saudi regulatory purposes.

This product qualified for the following regulatory pathway normal submission.

2.3 Product Information

The approved Summary of Product Characteristics (SPC) with the submission can be found on Saudi Drug Information System (SDI) at https://sdi.sfda.gov.sa/

3. Scientific discussion about the product:

3.1 Quality Aspects

3.1.1 Drug Substance

- Celecoxib is white to off white powder. Celecoxib is practically insoluble in water, soluble in anhydrous ethanol and soluble in dichloromethane at temperature 25°C ± 2°C. Celecoxib does not have any chiral centers. Polymorphism has been observed.
- The drug substance is manufactured by multiple-step chemical synthesis.

- The structure of Celecoxib has been fully elucidated using several spectroscopic techniques.

- The drug substance specification includes relevant tests for proper quality control. The control methods are validated according to international guidelines.

- Appropriate stability data have been presented and justify the established re-test period.

3.1.2 Drug Product

- Celecoxib drug product is available in two strengths:
  1. 100 mg capsule: white to off white powder, having a white opaque cap and a white opaque body with 'C5' imprinted on a blue band on the cap and ‘100 mg’ imprinted on a blue band on the body.
  2. 200 mg capsule: white to off white powder, having a white opaque cap, a white opaque body with 'C6' imprinted on a yellow band on the cap and ‘200 mg’ imprinted on a yellow band on the body.
- Each capsule contains 100 mg or 200 mg of Celecoxib. The composition of the drug product is adequately described, qualitatively and quantitatively. Suitable pharmaceutical development data have been provided for the finished product composition and manufacturing process.

- The manufacturing process is described narratively and in sufficient detail, taking into account pharmaceutical development data. Batch manufacturing formulas and in-process controls are included.

- The drug product specification covers appropriate parameters for this dosage form which allow for proper control of the finished drug product. The control methods are validated according to international guidelines. Batch data show consistent quality of the drug product.

- The drug product is packaged in a carton box, containing 2 Alu-clear PVC/PVdC blisters, containing 10 capsules in each blister.

- Appropriate stability data have been generated in the packaging material intended for commercial use and following relevant international guidelines. The data show good stability of the finished product and support the shelf life.

3.2 Clinical Aspects

3.2.1 Bioequivalence study

A randomized, open label, two treatment, two period, two sequence, single dose, crossover, bioequivalence study of Celecoxib 200 mg of Macleods Pharmaceuticals Ltd., India and Celebrex® (Celecoxib) 200 mg of Pfizer Limited, UK, in healthy human adult subjects, under fasting condition. The study was conducted in accordance with Gulf Cooperation Council (GCC) Guidelines for Bioequivalence, standards of Good Clinical Practice (GCP) and Good Laboratory Practices (GLP).

Blood samples were taken pre-dose (0.0) and at a specified time points up to 72 hours after administration of test or reference product. Plasma levels of Celecoxib were detected by a validated HPLC-MS/MS method. Thirty-seven (37) subjects completed the study and all data were analyzed. No significant protocol deviations were reported. There were no serious adverse events reported in the study.

The ratio and 90% Confidence Intervals of Test versus Reference for Celecoxib are tabulated below:

Table 1: Ratio and 90% Confidence Intervals (C.I.) of Test versus Reference for Celecoxib:

Pharmacokinetic Parameter	**Point Estimate**	**90% Confidence Intervals (%)**
C_{max}	89.87	82.55 - 97.83
AUC_{0-t}	92.13	85.08 - 99.77
$AUC_{0-\infty}$	89.36	84.19 - 94.85

Based on the results obtained in this study, Celecoxib 200 mg of Macleods Pharmaceuticals Ltd., India, is **bioequivalent** to Celebrex® (Celecoxib) 200 mg of Pfizer Limited, UK, under fasting conditions.

4. Risk Management Plan

4.1 Artwork and Trade Name assessment (Artwork available in appendix)

Proposed trade Name	Dosage Form
Relexib	Capsules

Look –alike/Sound-alike (LA/SA) Error Risk Potential:

Relexib name LA/SA confusion risk potential has been assessed based on the evaluation of LA/SA similarities from our data sources (SFDA registered Drug List, Martindale, ISMP Confused Drug Name List, INN International Nonproprietary Names and USAN United States Adopted Names STEM) and the pharmaceutical characteristic of the product:

LA/SA for Product name	SFDA	Shared File/ Excel Sheet	Martindale	Stem Book 2018
Relexib	NO	NO	NO	NO

Trade Name Recommendation:

Based on the submitted data, the proposed name Relexib is accepted.

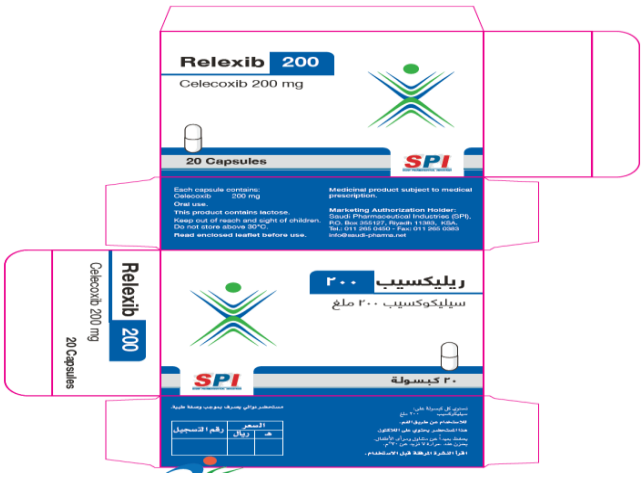
Outer and Inner Package:

Based on the submitted data, the proposed artwork is accepted.

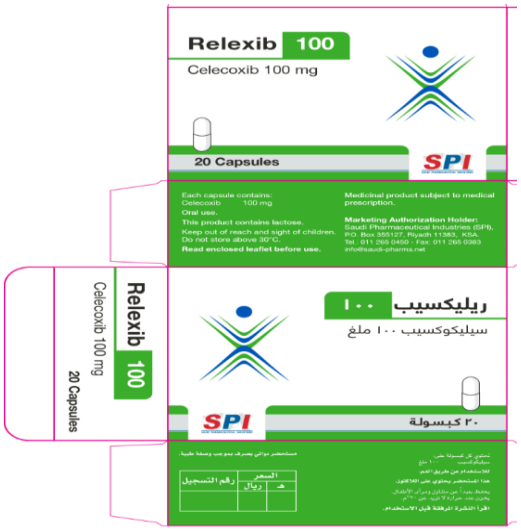
5. Overall Conclusion

Based on a review of data on quality, safety and efficacy, SFDA considered that the benefit/risk profile of Relexib was favorable and decided to grant the marketing authorization of Relexib for indicated in adults for the symptomatic relief in the treatment of osteoarthritis, rheumatoid arthritis and ankylosing spondylitis. The decision to prescribe a selective cyclooxygenase-2 (COX-2) inhibitor should be based on an assessment of the individual patient's overall risks.

6. Appendix


Relexib 200
Celecoxib 200 mg
20 Capsules
SPI
Each capsule contains:
Celecoxib 200 mg
Oral use.
This product contains lactose.
Keep out of reach and sight of children.
Do not store above 30°C.
Read enclosed leaflet before use.
Medicinal product subject to medical prescription.
Marketing Authorization Holder:
Saudi Pharmaceutical Industries (SPI),
P.O. Box 355127, Riyadh 11383, KSA.
Tel.: 011 265 0450 - Fax: 011 265 0383
info@saudi-pharma.net
ريليكسيب ٢٠٠
سيليكوكسيب ٢٠٠ ملغ
٢٠ كبسولة
السعر
رقم التسجيل
ريال
هـ
Relexib 200
Celecoxib 200 mg
20 Capsules


B. No.
Relexib 200
Celecoxib 200 mg
Exp. dt.
SFDA


Relexib 100
Celecoxib 100 mg
20 Capsules
SPI
Each capsule contains:
Celecoxib 100 mg
Oral use.
This product contains lactose.
Keep out of reach and sight of children.
Do not store above 30°C.
Read enclosed leaflet before use.
Medicinal product subject to medical prescription.
Marketing Authorization Holder:
Saudi Pharmaceutical Industries (SPI),
P.O. Box 355127, Riyadh 11383, KSA.
Tel.: 011 265 0450 - Fax: 011 265 0383
info@saudi-pharma.net
ريليكسيب ١٠٠
سيليكوكسيب ١٠٠ ملغ
٢٠ كبسولة
السعر
رقم التسجيل
ريال
هـ
Relexib 100
Celecoxib 100 mg
20 Capsules


B. No.
Relexib 100
Celecoxib 100 mg
Exp. dt.

The date of revision of this text corresponds to that of the Saudi PAR. New information concerning the authorized medicinal product in question will not be incorporated into the Saudi PAR. New findings that could impair the quality, efficacy or safety of the medicinal product are recorded and published only at SDI.

For inquiries and feedback regarding Saudi PAR, please contact us at Saudi.PAR@sdfa.gov.sa