This content has been produced by Sanofi. For Great Britain Healthcare Professionals only. MAT-XU-2203097(V2.0) | January 2024. Prescribing information can be found on the last 2 pages.

sanofi



# **MECHANISM OF ACTION**

Summary

Rezurock is indicated for the treatment of patients aged 12 years and older with chronic graft-versus-host disease (chronic GVHD) who have received at least two prior lines of systemic therapy

Adverse events should be reported. Reporting forms and information can be found at <u>www.mhra.gov.uk/yellowcard</u> or search for MHRA Yellow Card in the Google Play or Apple App Store. Adverse events should also be reported to the Sanofi drug safety department on Tel: 0800 0902 314. Alternatively, send via email to <u>UK-</u> <u>drugsafety@sanofi.com</u>

### **REZUROCK targets both the inflammatory and the fibrotic processes of cGVHD**<sup>1-3</sup>

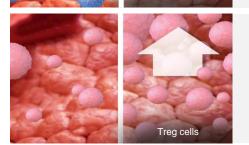
### REZUROCK is an immunomodulator that selectively inhibits the ROCK2 pathway<sup>1-3</sup>

### HOW DOES REZUROCK IMPACT INFLAMMATION?

**Pro-inflammatory** 

cells

Decreases the activation of STAT3, triggering the **significant downregulation of both Th17 and Tfh cells**, leading to the decreased production of pro-inflammatory cytokines<sup>2,4</sup>



Increases the phosphorylation of STAT5, causing the **upregulation of Treg cells**<sup>5</sup>

#### **Reduces inflammation**

via its immunomodulatory effect on STAT3 and STAT5 phosphorylation<sup>2,4</sup>

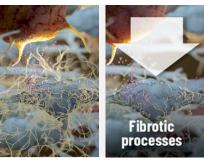
The mechanism of action of belumosudil was studied through ex vivo or in vitro human T-cell assays and in animal models of chronic GvHD. The clinical significance of ROCK2 inhibition data is not known.

cGVHD, chronic graft-versus-host disease; ROCK2, rho-associated coiled-coil-containing protein kinase-2; STAT3, signal transducer and activator of transcription 3; STAT5, signal transducer and activator of transcription 5; Tfh, follicular helper T[cell]; Th17, type 17 helper T[cell]; Treg, regulatory T[cell].



## **REZUROCK targets both the inflammatory and the fibrotic processes of cGVHD**<sup>1-3</sup> (cont)

## REZUROCK is an immunomodulator that selectively inhibits the ROCK2 pathway<sup>1-3</sup> (cont) HOW DOES REZUROCK IMPACT FIBROSIS?



**Prevents the polymerization of G-actin to F-actin** as well as MRTF changes to profibrotic gene expression<sup>6</sup> Downregulates fibrosis,

as evidenced by decreased collagen deposition around the bronchioles and the delayed progression of scleroderma in animal cGVHD models<sup>3</sup>

As an oral selective ROCK2 inhibitor, REZUROCK is an innovative treatment designed to restore **immune homeostasis** and to **downregulate the fibrotic processes** of cGVHD.<sup>1-3</sup>

The mechanism of action of belumosudil was studied through ex vivo or in vitro human T-cell assays and in animal models of chronic GvHD. The clinical significance of ROCK2 inhibition data is not known.

cGVHD, chronic graft-versus-host disease; MOA, mechanism of action; MRTF, myocardin-related transcription factor; ROCK2, rho-associated coiled-coil-containing protein kinase-2.



Therapy should be initiated and supervised by physicians experienced in the management of chronic GVHD. Please refer to the Summary of Product Characteristics (SmPC) before prescribing.

Presentation: Each film-coated tablet contains belumosudil mesilate, equivalent to 200mg belumosudil.

**Indication:** Rezurock is indicated for the treatment of patients aged 12 years and older with chronic graft-versus- host disease (chronic GVHD) who have received at least two prior lines of systemic therapy.

Dosage and Administration: The recommended dose of Rezurock is 200mg administered orally once daily at approximately the same time with a meal. The film-coated tablet should not be broken. crushed or chewed. Treatment should continue until disease progression or unacceptable toxicity. A complete blood cell count and liver function test must be performed before initiating therapy with Rezurock. Perform liver function tests at least monthly throughout treatment. Dose modification due to hepatotoxicity and other adverse reactions: For Grade 3 alanine aminotransferase (ALT) or aspartate aminotransferase (AST) (>5 - 20 × upper limit of normal (ULN)) or Grade 2 bilirubin (>1.5 - 3 × ULN) or other Grade 3 adverse reactions, hold Rezurock until recovery to ≤Grade 1, then resume Rezurock at the recommended dose at physician's discretion. For Grade 4 ALT or AST (>20 × ULN) or Grade ≥3 bilirubin (>3 × ULN) or other Grade 4 adverse reactions, permanently discontinue Rezurock. Dose modification due to drug interactions: Strong CYP3A Inducers: Increase the dosage of Rezurock to 200mg twice daily when co-administered with strong CYP3A inducers. Proton Pump Inhibitors: Increase the dosage of Rezurock to 200mg twice daily when co- administered with proton pump inhibitors. Delayed or missed dose: If a dose is missed or delayed for <12 hours after the scheduled dose, the dose should be taken as soon as possible on the same day with a return to the normal schedule the following day. If a dose is missed or delayed for >12 hours after the scheduled dose, the dose should be taken at the usual time the following day. If a patient vomits following the intake of a dose, the next dose should be taken at the usual time the following day. Patients should not take extra doses to make up the missed dose.

**Special Populations:** <u>Hepatic impairment</u>: Dose modification is not recommended when administering belumosudil to patients with mild or moderate hepatic impairment (Child-Pugh A and B). Belumosudil is not recommended in patients with severe hepatic impairment. The safety and efficacy of belumosudil in severe (Child-Pugh C) hepatic impairment has not been evaluated. For patients with pre-existing severe hepatic impairment (Child-Pugh C), consider the risks and potential benefits before initiating treatment with belumosudil. Monitor patients frequently for adverse reactions.

<u>Renal impairment:</u> No dose modification of Rezurock is required in patients with mild or moderate renal impairment (creatine clearance ≥30 mL/min). No data are available for patients with severe renal impairment (creatine clearance<30 mL/min) or for patients with end-stage renal disease on dialysis. Use with caution. <u>Elderly patients (≥65 years)</u>: No additional dose adjustments are recommended for elderly patients. <u>Paediatric population</u>: The posology is the same in adults and

adolescents aged 12 – 18 years. The safety and efficacy of Rezurock in children and adolescents aged below 12 years of age have not been established. No data are available.

**Contraindications:** Pregnancy. Hypersensitivity to the active substance or to any of the excipients. Precautions and Warnings: Female patients of childbearing potential and male patients with female partners of childbearing potential: Women of childbearing potential (WOCBP) should be advised to avoid becoming pregnant while they or their male partner are taking belumosudil and of the potential risk to a fetus. WOCBP should be advised to have a pregnancy test prior to starting treatment with belumosudil. WOCBP and male patients with female partners of childbearing potential must use a highly effective method of contraception during treatment with belumosudil and for at least one week after the last dose of belumosudil. Hepatotoxicity: Increases in liver function tests were observed in clinical studies with belumosudil and generally occurred early during treatment with the incidence decreasing thereafter. Liver function tests should be performed prior to the initiation of treatment with belumosudil and monitored at least monthly during treatment with belumosudil and the dose should be adjusted for ≥Grade 2 toxicities. Sodium: This product is essentially sodium free. Interactions: Effect of CYP3A inhibitors on belumosudil: The coadministration of multiple doses of itraconazole did not alter exposure to belumosudil to any clinically relevant extent. Effect of CYP3A inducers on belumosudil: The co- administration of multiple doses of rifampin decreased belumosudil Cmax by 59% and AUC by 72%. The co- administration of strong CYP3A4 inducers with belumosudil may decrease belumosudil exposure. Increase the dose of belumosudil to 200mg twice daily. The co-administration of moderate CYP3A4 inducers e.g., efavirenz is predicted to have a reduced effect on belumosudil as compared to strong CYP3A4 inducers. The co-administration of moderate CYP3A4 inducers with belumosudil may decrease belumosudil exposure. No dose adjustment is recommended. Effect of proton pump inhibitors on belumosudil: The co-administration of multiple doses of rabeprazole decreased belumosudil Cmax by 87% and AUC by 80%. The co-administration of multiple doses of omeprazole decreased belumosudil Cmax by 68% and AUC by 47%. The co-administration of proton pump inhibitors with belumosudil may decrease belumosudil exposure. Increase the dose of belumosudil to 200mg twice daily. Effect of other gastric acid reducing agents on belumosudil: The coadministration of belumosudil with gastric acid reducing agents other than proton pump inhibitors may decrease belumosudil exposure. No dose adjustment is recommended, however belumosudil and the gastric acid reducing agent should be taken 12 hours apart. In vitro studies: Effect of belumosudil on CYP3A substrates: The co- administration of belumosudil is predicted to increase midazolam Cmax and AUC approximately 1.3- and 1.5-fold, respectively. No dose adjustment is recommended.

The co- administration of belumosudil may increase exposure of sensitive CYP3A4 substrates with a narrow therapeutic index such as ciclosporin and tacrolimus. No dose adjustment is recommended. *Effect of belumosudil on CYP2C9 substrates*: The co-administration of belumosudil is not expected to have clinically meaningful effect on the exposure of CYP2C9 substrates (such as warfarin). *Effect of belumosudil on CYP2C8 substrates*: The co-administration of belumosudil is not expected to have clinically meaningful effect on the exposure of CYP2C9 substrates (such as warfarin). *Effect of belumosudil on CYP2C8 substrates*: The co-administration of belumosudil is not expected to have clinically meaningful effect on the exposure of CYP2C8 substrates that are not an OATP1B1 substrate. *Effect of belumosudil on UGT1A1 substrates*: Belumosudil is a weak inhibitor of UGT1A1, the clinical consequences are not known. *Transporters*: Belumosudil is a substrate of P-gp. Belumosudil inhibits BCRP, P-gp, and OATP1B1. The co-administration of oral BCRP, P-gp and OATP1B1 substrates with belumosudil may increase the concentrations of the substrate drugs (such as digoxin and docetaxel).

**Pregnancy:** There are no data on the use of belumosudil in pregnant women. Belumosudil can cause fetal harm based on findings from animal studies and its mechanism of action. As a precautionary measure, belumosudil is contraindicated in pregnancy. **Breast-feeding:** It is unknown whether belumosudil or its metabolites are excreted in human milk. No data are available regarding the presence of belumosudil or its metabolites in animal or human milk or its effects on the breast-fed child, or on milk production. A risk to the infant cannot be excluded. Because of the potential for serious adverse reactions in a breast-fed child, breast-feeding should be discontinued during treatment with belumosudil and for at least one week after the last dose. **Fertility:** There are no human data on the effect of belumosudil on fertility. Based on findings from animal studies, belumosudil may impair male and female fertility at dose levels above the recommended clinical dose. The effects on fertility are reversible.

Adverse Reactions: Very common: Nausea, asthenia. Common: upper and lower respiratory tract

infections, anaemia, leukopenia, platelet count decreased, decreased appetite, hyperglycaemia, headache, neuropathy peripheral, dizziness, hypertension, dyspnoea, cough, diarrhoea, vomiting, abdominal pain, constipation, AST and ALT increased, gamma-glutamyltransferase increased, pruritus, musculoskeletal pain, muscle spasms, blood alkaline phosphatase increased, blood creatine phosphokinase increased, blood creatinine increased, oedema, pyrexia, weight decreased. *Prescribers should consult the SmPC in relation to other adverse reactions.* 

#### Legal Category: POM

GB List Price and Marketing Authorisation Number:

200mg x 30 tablets (PLGB 04425/0902): £6708.

Marketing Authorisation Holder: Sanofi, 410 Thames Valley Park Drive, Reading, Berkshire, RG6 1PT, UK.

**Further information is available from:** Medical Information, Sanofi, 410 Thames Valley Park Drive, Reading, Berkshire, RG6 1PT, UK.

uk-medicalinformation@sanofi.com

Date of preparation: January 2024

Adverse events should be reported. Reporting forms and information can be found at <u>www.mhra.gov.uk/yellowcard</u> or search for MHRA Yellow Card in the Google Play or Apple App Store. Adverse events should also be reported to the Sanofi drug safety department on Tel: 0800 0902 314. Alternatively, send via email to <u>UK-</u> <u>drugsafety@sanofi.com</u>

#### References

1. Rezurock Summary of Product Characteristics.

Zanin Zhorov A, Weiss JM, Nyuydzefe MS, et al. Proc Natl Acad Sci USA 2014;111(47):16814-16819. doi:10.1073/pnas.1414189111

- 2. Flynn R, Paz K, Du J, et al. Blood 2016;127(17):2144-2154. doi:10.1182/blood-2015-10-678706
- 3. Weiss JM, Chen W, Nyuydzefe MS, et al. Sci Signal 2016;9(437):ra73. doi:10.1126/scisignal.aad8953
- 4. Chen W, Nyuydzefe MS, Weiss JM, et al. Sci Rep 2018;8(1):16636. doi:10.1038/s41598-018-35109-9

5. Riches DWH, Backos DS and Redente EF. Am J Pathol 2015;185(4):909-12. doi:10.1016/j.ajpath.2015.01.005

