

# PRODUCT INFORMATION



**SHR-0302**

Item No. 42724

**CAS Registry No.:** 1445987-21-2

**Formal Name:** (3aα,5α,6aα)-hexahydro-N-(3-methoxy-1,2,4-thiadiazol-5-yl)-5-(methyl-7H-pyrrolo[2,3-d]pyrimidin-4-ylamino)-cyclopenta[c]pyrrole-2(1H)-carboxamide

**Synonym:** lvarmacitinib

**MF:** C<sub>18</sub>H<sub>22</sub>N<sub>8</sub>O<sub>2</sub>S

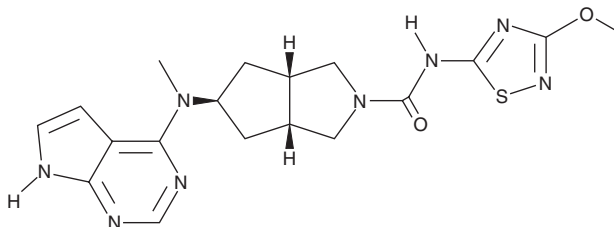
**FW:** 414.5

**Purity:** ≥95%

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

## Laboratory Procedures

SHR-0302 is supplied as a solid. A stock solution may be made by dissolving the SHR-0302 in the solvent of choice, which should be purged with an inert gas. SHR-0302 is sparingly soluble (1-10 mg/ml) in DMSO.

## Description

SHR-0302 is a JAK inhibitor (IC<sub>50</sub>s = 0.1, 0.9, and 7.7 nM for JAK1, -2, and -3, respectively).<sup>1</sup> It is selective for these kinases over tyrosine kinase 2 (TYK2; IC<sub>50</sub> = 42 nM). SHR-0302 inhibits the activation, proliferation, and TGF-β-1-induced migration of HSC-T6 rat hepatic stellate cells when used at concentrations ranging from 0.1 to 10 μM.<sup>2</sup> It also decreases collagen production and JAK1 and STAT3 phosphorylation in HSC-T6 cells. *In vivo*, SHR-0302 (3 mg/kg) decreases disease severity and paw swelling in a rat model of adjuvant-induced arthritis.<sup>3</sup> It increases survival, white blood cell count, red blood cell count, and platelet count and decreases body weight loss and disease severity in a mouse model of bone marrow transplant-induced graft-versus-host disease (GVHD) when administered prophylactically at a dose of 5 mg/kg.<sup>1</sup>

## References

1. Sun, X., He, Q., Yang, J., *et al.* Preventive and therapeutic effects of a novel JAK inhibitor SHR0302 in acute graft-versus-host disease. *Cell Transplant.* **30**, 1-16 (2021).
2. Gu, Y.-J., Sun, W.-Y., Zhang, S., *et al.* Targeted blockade of JAK/STAT3 signaling inhibits proliferation, migration and collagen production as well as inducing the apoptosis of hepatic stellate cells. *Int. J. Mol. Med.* **38**(3), 903-911 (2016).
3. Wu, H., Yan, S., Chen, J., *et al.* JAK1-STAT3 blockade by JAK inhibitor SHR0302 attenuates inflammatory responses of adjuvant-induced arthritis rats and decreases Th17 and total B cells. *Joint Bone Spine* **83**(5), 525-532 (2016).

### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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