R406
Syk inhibitor
Catalog # inh-r406
For research use only
Version # 14F23-MT

PRODUCT INFORMATION

Content:
• 2 mg R406 provided as a lyophilized powder
Note: R406 is sterile filtered prior to lyophilization.

Storage and stability:
- R406 is provided as a solid and shipped at room temperature. Store lyophilized product at -20°C for up to 2 years.
- Upon resuspension, R406 should be stored at -20°C. Resuspended product is stable for 6 months when properly stored. Avoid repeated freeze-thaw cycles.

Quality control:
- The absence of bacterial contamination (e.g. endotoxins, peptidoglycans) is controlled using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

DESCRIPTION
R406 (the active metabolite of Fostamatinib) is a specific, ATP-competitive inhibitor of spleen tyrosine kinase (Syk), which plays a key role in the signaling of activating Fc receptors and the B-cell receptor. R406 was shown to potently inhibit IgE- and IgG-mediated activation of Fc receptor signaling and to reduce inflammation in animal models of arthritis1. In cancers characterized by over-expression of Syk, R406 treatment induces the activation of caspase leading to significant apoptosis2,3. Syk also activates the NLRP3 inflammasome4. Inhibition of Syk with R406 selectively abrogates inflammasome activation by C. albicans but not by inflammasome activators such as the bacterial toxin nigericin4.

CHEMICAL PROPERTIES
CAS number: 841290-80-0
Chemical Name: 6-(5-fluoro-2-(3,4,5-trimethoxyphenylamino) pyrimidin-4-ylamino)-2,2-dimethyl-2H-pyrido[3,2-b][1,4]oxazin-3(4H)-one
Formula: C22 H23 FN6O5
Molecular weight: 470.45
Solubility: 20 mg/ml (42 mM) in DMSO
Purity: >97% (UHPLC)

METHOD

Preparation of 10 mM stock solution:
1. Add 425 µl of DMSO to 2 mg of R406
2. Vortex until complete solubilization.
3. Prepare aliquots and store at -20°C. Once R406 is solubilized, dilutions can be prepared with aqueous buffers.

PROTOCOLS (For reference only)

Cell Culture Assay
Cells: DLBCL (diffuse large B-cell lymphoma) cell lines
Working concentration: 0.3, 0.6, 1.25, 2.5, or 5 µM
Incubation time: 72 hours

Animal Study
Animal model: Female C57BL/6 mice
Dose: 10 mg/kg/day
Administration: Orally

Solubility: 1% DMSO/30% polyethylene glycol/1% Tween 80

RELATED PRODUCTS

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Piceatannol</td>
<td>Syk inhibitor</td>
<td>tlrl-pct</td>
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<tr>
<td>pUNO1-hSYK</td>
<td>Human SYK gene</td>
<td>pUNO1-hsyk</td>
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<tr>
<td>pUNO1-mSYK</td>
<td>Mouse SYK gene</td>
<td>pUNO1-msyk</td>
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<tr>
<td>HKCA</td>
<td>Heat-killed C. albicans</td>
<td>tlrh-hkca</td>
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<tr>
<td>HKST</td>
<td>Heat Killed S.typhimurium</td>
<td>tlrh-hkst</td>
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<tr>
<td>Nigericin</td>
<td>Microbial toxin</td>
<td>tlrh-nig</td>
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