**AG490**
Janus kinase 2 inhibitor
Catalog # tlrl-ag4
For research use only
Version # 15K02-MM

### PRODUCT INFORMATION

**Content:**
- 10 mg AG490

**Storage and stability:**
- AG490 is provided as a translucent film and shipped at room temperature. Store at -20°C. Solid product is stable 1 year at -20°C.
- Upon resuspension, AG490 should be aliquoted and stored at -20°C. Avoid repeated freeze-thaw cycles. Resuspended product is stable for 6 months at -20°C when properly stored.

**Quality control:**
- Purity: ≥99% (UHPLC)
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) is confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

### DESCRIPTION

AG490 is a specific and potent inhibitor of the Janus kinase 2 protein (JAK2). JAK2 regulates the phosphorylation of JNK, primarily through PI3K. It has been established that JAK2 plays an important role in TLR-mediated biological responses, blocking TLR4-mediated responses to LPS and TLR5-mediated responses to flagellin. JAK2 is also involved in cytokine signaling, such as IL-2, IL-6 and IL-12.

### CHEMICAL PROPERTIES

**Synonym:** Tyrophostin B42  
**Formula:** C17H14N2O3  
**Molecular weight:** 294.3  
**Solubility:** 50 mg/ml in DMSO and 5 mg/ml in ethanol  
**Structure:**

![Chemical Structure](image)

### METHODS

**Preparation of stock solution (40 mM)**

1. Add 850 µl DMSO to 10 mg AG490.
2. Vortex until complete solubilization. Prepare aliquots and store at -20°C. Once AG490 is solubilized, dilutions can be prepared with aqueous buffers.

**Working concentration:** 20-50 µM for cell culture assays

### PROTOCOLS (For reference only)

#### Cell Culture Assay

**Cells:** Bone marrow-derived macrophages  
**Working concentration:** 20 µM  
**Incubation time:** 1 h  
**Method:** Western blotting to study STAT1 activation

#### Cell Culture Assay

**Cells:** U266 human myeloma cell line  
**Working concentration:** 25-50 µM  
**Incubation time:** 24 h  
**Method:** Flow cytometry and apoptosis assays

#### Animal Study

**Animal model:** NOD and BALB/c mice  
**Dose:** 1 mg/mouse  
**Administration:** Intraperitoneal injection (i.p.)


### RELATED PRODUCTS

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<td>JAK1 &amp; JAK2 inhibitor</td>
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<td>CP-690550</td>
<td>JAK3 Inhibitor</td>
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<td>Ruxolitinib</td>
<td>JAK1 &amp; JAK2 inhibitor</td>
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