**Product Description**

Janus Associated Kinase (JAK) Inhibitor I is a pyridine-containing tetracycle that disrupts JAK activity by interacting with the ATP binding domain. This inhibitor inhibits mouse JAK3 with Ki = 5 nM, JAK family members TYK2 and JAK2 with IC50 = 1 nM, and mouse JAK1 with IC50 = 15 nM, while showing weaker inhibition of other kinases (Thompson et al.).

**Molecular Name:** JAK Inhibitor I  
**Alternative Names:** CMP 6; Janus-associated kinase inhibitor I; Pyridone 6  
**CAS Number:** 457081-03-7  
**Chemical Formula:** C₁₈H₁₇FN₃O  
**Molecular Weight:** 309.3 g/mol  
**Purity:** ≥ 98%  
**Chemical Name:** 2-(1,1-dimethylethyl)-9-fluoro-1,6-dihydro-7H-benz[h]imidazo[4,5-f]isoquinolin-7-one  

**Structure:**

![Structure of JAK Inhibitor I]

**Properties**

**Physical Appearance:** A crystalline solid  
**Storage:** Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant. For product expiry date, please contact techsupport@stemcell.com.  
**Solubility:**  
- DMSO ≤ 45 mM  
- Absolute ethanol ≤ 3 mM  
For example, to prepare a 10 mM stock solution in DMSO, resuspend 0.5 mg in 162 μL of DMSO.  

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.  

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.
Published Applications

REPROGRAMMING
· Inhibits the generation of mouse induced pluripotent stem cells (Efe et al.; Kim et al.).

IMMUNOLOGY
· Inhibits anti-viral response associated with JAK/STAT pathway activation (Xu et al.).

References


Related Small Molecules

For a complete list of small molecules available from STEMCELL Technologies, please visit our website at www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2017 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, and Scientists Helping Scientists are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.