### Catalog # 73182

**GSK429286A**

**Small Molecules**

RHO/ROCK pathway inhibitor; Inhibits ROCK1 and ROCK2

10 mg

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**Product Description**

GSK429286A is a cell-permeable inhibitor of Rho-associated kinases ROCK1 and ROCK2 with IC\textsubscript{50} values of 14 and 63 nM, respectively. It has improved oral bioavailability compared to closely related inhibitors. It also shows some selectivity towards p90 and p70 ribosomal S6 kinases (RSK) and leucine-rich repeat protein kinase-2 (LRRK2), with IC\textsubscript{50} values in the high nanomolar range (Goodman et al.; Nichols et al.).

**Molecular Name:** GSK429286A  
**Alternative Names:** GSK 429286  
**CAS Number:** 864082-47-3  
**Chemical Formula:** C\textsubscript{21}H\textsubscript{16}F\textsubscript{4}N\textsubscript{4}O\textsubscript{2}  
**Molecular Weight:** 432.4 g/mol  
**Purity:** ≥ 98%  
**Chemical Name:** N-(6-fluoro-1H-indazol-5-yl)-6-methyl-2-oxo-4-[4-(trifluoromethyl)phenyl]-3,4-dihydro-1H-pyridine-5-carboxamide

Structure:

![Structure](image)

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**Properties**

**Physical Appearance:** A crystalline solid

**Storage:** Product stable at -20°C as supplied. Protect from prolonged exposure to light. Stable as supplied for 12 months from date of receipt.

**Solubility:**
- DMSO ≤ 20 mM
- Absolute ethanol ≤ 2 mM

For example, to prepare a 10 mM stock solution in DMSO, resuspend 10 mg in 2.31 mL 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

MAINTENANCE AND SELF-RENEWAL
· Induces senescence-resistant proliferation of keratinocytes (Chapman et al.).
· ROCK inhibitors such as Y-27632 (Catalog #72302) enhance the survival and cloning efficiency of human pluripotent stem cells when they are dissociated to single cells (Watanabe et al.).

DISEASE MODELING
· Reverses adrenalin-induced contraction of rat aortic tissue and decreases mean arterial pressure in spontaneously hypertensive rats (Goodman et al.).

References

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

This product is hazardous. Please refer to the Safety Data Sheet (SDS).