

## Small Molecules

### FAK Inhibitor 14

Focal adhesion kinase 1 (FAK1) inhibitor

Catalog # 73132  
73134

500 mg  
5 g



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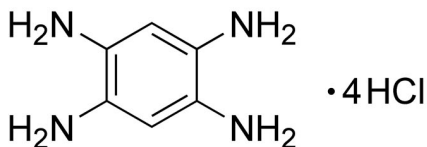
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## Product Description

FAK Inhibitor 14 is a direct inhibitor of focal adhesion kinase 1 (FAK1) autophosphorylation at Y397 ( $IC_{50} \cong 1 \mu M$ ; Golubovskaya et al.). There is no known significant effect on the activity of a range of other kinases, including the homolog PYK-2 (Golubovskaya et al.). This product is supplied as the tetrahydrochloride salt of the molecule.

Molecular Name:	FAK Inhibitor 14 (Tetrahydrochloride)
Alternative Names:	Focal Adhesion Kinase, Y15
CAS Number:	4506-66-5
Chemical Formula:	$C_6H_{10}N_4 \cdot 4HCl$
Molecular Weight:	284.0 g/mol
Purity:	$\geq 95\%$
Chemical Name:	benzene-1,2,4,5-tetraammine tetrahydrochloride
Structure:	



## Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at $-20^{\circ}C$ as supplied. Protect from prolonged exposure to light. For product expiry date, please contact <a href="mailto:techsupport@stemcell.com">techsupport@stemcell.com</a> .
Solubility:	<ul style="list-style-type: none"><li>· Water <math>\leq 70</math> mM</li><li>· DMSO <math>\leq 70</math> mM</li></ul> For example, to prepare a 10 mM stock solution in water, resuspend 100 mg in 35.2 mL of water.

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  $-20^{\circ}C$ . 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.

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

### CANCER

- Demonstrates anti-tumor activity in multiple cell lines and in xenograft tumor models (Golubovskaya et al.; O'Brien et al.; Hochwald et al.; Beierle et al.).

### DISEASE MODELING

- Decreases phenylephrine-activated stiffening of mouse aortic tissue, a model of early cardiovascular disease (Saphirstein et al.).

## References

- Beierle EA et al. (2010) Inhibition of focal adhesion kinase decreases tumor growth in human neuroblastoma. *Cell Cycle* 9(5): 1005–15.
- Golubovskaya VM et al. (2008) A small molecule inhibitor, 1,2,4,5-benzenetetraamine tetrahydrochloride, targeting the y397 site of focal adhesion kinase decreases tumor growth. *J Med Chem* 51(23): 7405–16.
- Hochwald SN et al. (2009) A novel small molecule inhibitor of FAK decreases growth of human pancreatic cancer. *Cell Cycle* 8(15): 2435–43.
- O'Brien S et al. (2014) FAK inhibition with small molecule inhibitor Y15 decreases viability, clonogenicity, and cell attachment in thyroid cancer cell lines and synergizes with targeted therapeutics. *Oncotarget* 5(17): 7945–59.
- Saphirstein RJ et al. (2013) The focal adhesion: a regulated component of aortic stiffness. *PLoS One* 8(4): e62461.

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