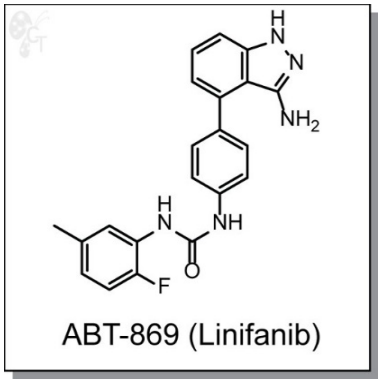
Product Specification Sheet

Product Name: ABT-869 (Linifanib)

Catalog Number: C2869



ABT-869 (Linifanib)

Technical information:

Chemical Formula:	$C_{21}H_{18}FN_5O$
CAS #:	796967-16-3
Molecular Weight:	375.41
Purity:	> 98%
Appearance:	White solid
Solubility:	Soluble in DMSO up to 100 mM
Chemical Name:	1-(4-(3-amino-1H-indazol-4-yl)phenyl)-3-(2-fluoro-5-methylphenyl)urea
Storage:	Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.
Shelf Life:	In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.

Handling:

- To make 10 mM stock solution, add 0.266mL of DMSO for each mg of ABT-869 (Linifanib)
- For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

Biological Activity:

ABT-869 (Linifanib) is an aminobenzopyrazole-based, orally available, ATP-competitive receptor tyrosine kinase inhibitor with IC50 potency against KDR, FLT1, CSF-1R, FLT3, and PDGFRb of 4 nM, 3 nM, 3 nM, 4 nM, and 66 nM, respectively. It is highly selective (> 1uM) against unrelated tyrosine kinases and serine/threonine kinases. [1] In cellular assays, ABT-689 exhibited potency against ligand-induced PDGFRbeat, KIT, and CSF-1R phosphorylation, with IC50s of 2, 31, and 10 nM, respectively.

In vivo, ABT-869 is orally effective in a wide range of human xenograft models, including MV4-11, HT1080, H526, DLD-1, A431, MX-1, MDA-231, MDA-435LM, and glioma 9L. [2] ABT-869 displays antiproliferative and apoptotic effects on cancer cells dependent on mutant kinases, such as FLT3. Consequently, ABT-869 is in clinical studies for the treatment of acute myeloid leukemia (AML). [3, 4] ABT-689 has been shown to induce apoptosis through an AKT and GSK-3beta-dependent pathway, thus suggesting that combination therapies with GSK-3beta inhibitors may be a promising approach to AML treatment. [3]

Reference:

1. Albert et al., Preclinical activity of ABT-869, a multitargeted receptor tyrosine kinase inhibitor. Mol. Cancer Ther. 2006, 5, 995-1006. Pubmed ID: 16648571
2. Zhou et al., ABT-869, a promising multi-targeted tyrosine kinase inhibitor: from bench to bedside. J. Hematol. Oncol. 2009, 2, 33-45. Pubmed ID: 19642998
3. Hernandez-Davies et al., The multitargeted receptor tyrosine kinase inhibitor linifanib (ABT-869) induces apoptosis through an Akt and glycogen synthase kinase 3β-dependent pathway. Mol. Cancer Ther. 2011, 10, 949-959. Pubmed ID: 21471285
4. Shankar et al., ABT-869, a multitargeted receptor tyrosine kinase inhibitor: inhibition of FLT3 phosphorylation and signaling in acute myeloid leukemia. Blood, 2007, 109, 3400-3408. Pubmed ID: 17209055

For Technical Support: technical@cellagentech.com

For research use only, not for clinical or diagnostic use.