# Product Specification Sheet

**Product Name:** ABT-869 (Linifanib)  
**Catalog Number:** C2869

## Technical Information:
- **Chemical Formula:** C$_{21}$H$_{18}$FN$_{5}$O  
- **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-869 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-869 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:

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