

# PRODUCT INFORMATION

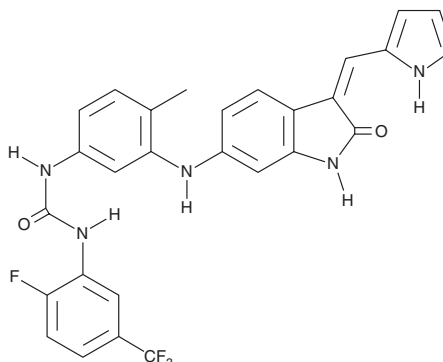


## GNF-5837

Item No. 14883

**CAS Registry No.:** 1033769-28-6  
**Formal Name:** N-[3-[[2,3-dihydro-2-oxo-3-(1H-pyrrol-2-ylmethylene)-1H-indol-6-yl]amino]-4-methylphenyl]-N'-[2-fluoro-5-(trifluoromethyl)phenyl]-urea

**MF:** C<sub>28</sub>H<sub>21</sub>F<sub>4</sub>N<sub>5</sub>O<sub>2</sub>  
**FW:** 535.5  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 257, 366, 450 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

GNF-5837 is supplied as a crystalline solid. A stock solution may be made by dissolving the GNF-5837 in the solvent of choice, which should be purged with an inert gas. GNF-5837 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of GNF-5837 in these solvents is approximately 1, 3, and 5 mg/ml, respectively.

GNF-5837 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GNF-5837 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. GNF-5837 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Tropomyosin-related kinases (Trks) are receptor tyrosine kinases activated by peptides, including neurotrophins. They have prominent roles in the development of central and peripheral nervous systems, vascular cell survival, and cancer.<sup>1</sup> Rearrangement of genes for Trks with the transcription factor Tel, producing Tel-Trk fusion proteins, are associated with various types of cancer.<sup>2,3</sup> GNF-5837 is a potent, bioavailable pan-Trk inhibitor that blocks the proliferation of cells expressing Tel-TrkA, Tel-TrkB, and Tel-TrkC (IC<sub>50</sub>s = 7, 9, and 11 nM, respectively).<sup>3</sup> It less effectively inhibits c-Kit and PDGFRβ (IC<sub>50</sub>s = 0.91 and 0.87 μM, respectively), while requiring micromolar concentrations to inhibit an array of other receptor and non-receptor tyrosine kinases. GNF-5837 inhibits the growth of Ba/F3 and rat intestinal epithelial (RIE) cells expressing both TrkA and nerve growth factor (NGF) with IC<sub>50</sub> values of 42 and 17 nM, respectively, but does not have anti-proliferative activity of parental cells at concentrations up to 10 μM.<sup>3</sup> GNF-5837 displays good bioavailability in mice and rats when given intravenously but not orally.<sup>3</sup> It induces regression of tumor xenografts derived from RIE cells expressing both TrkA and NGF.<sup>3</sup>

### References

1. Caporali, A. and Emanuelli, C. *Physiol. Rev.* **89**(1), 279-308 (2009).
2. Liu, Q., Schwaller, J., Kutok, J., et al. *EMBO J.* **19**(8), 1827-1838 (2000).
3. Albaugh, P., Fan, Y., Mi, Y., et al. *ACS Med. Chem. Lett.* **3**(2), 140-145 (2012).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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