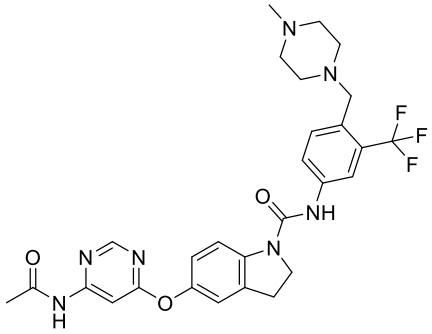
Product data sheet

MedKoo Cat#: 407139 Name: BBT-594 CAS#: 882405-89-2 Chemical Formula: $C_{28}H_{30}F_3N_7O_3$ Exact Mass: 569.23622 Molecular Weight: 569.59	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
BBT594, also known as NVP-BBT594, is potent and selective RET and JAK2 inhibitor. NVP-BBT594 impairs GDNF-RET signaling and GDNF-dependent growth of MCF7-LTED cells. NVP-BBT594 targets GDNF-RET signaling and sensitizes MCF7-2A cells to letrozole treatment. GDNF-RET signaling as a rational therapeutic target may be useful to combat or delay the onset of AI resistance in breast cancer.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	33.0	57.94

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.76 mL	8.78 mL	17.56 mL
5 mM	0.35 mL	1.76 mL	3.51 mL
10 mM	0.18 mL	0.88 mL	1.76 mL
50 mM	0.04 mL	0.18 mL	0.35 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Zhang Q, Shi C, Han L, Jain N, Roberts KG, Ma H, Cai T, Cavazos A, Tabe Y, Jacamo RO, Mu H, Zhao Y, Wang J, Wu SC, Cao F, Zeng Z, Zhou J, Mi Y, Jabbour EJ, Levine R, Tasian SK, Mullighan CG, Weinstock DM, Fruman DA, Konopleva M. Inhibition of mTORC1/C2 signaling improves anti-leukemia efficacy of JAK/STAT blockade in CRLF2 rearranged and/or JAK driven Philadelphia chromosome-like acute B-cell lymphoblastic leukemia. Oncotarget. 2018 Jan 17;9(8):8027-8041. doi: 10.18632/oncotarget.24261. PMID: 29487712; PMCID: PMC5814279.
2. Morandi A, Martin LA, Gao Q, Pancholi S, Mackay A, Robertson D, Zvelebil M, Dowsett M, Plaza-Menacho I, Isacke CM. GDNF-RET signaling in ER-positive breast cancers is a key determinant of response and resistance to aromatase inhibitors. Cancer Res. 2013 Jun 15;73(12):3783-95. doi: 10.1158/0008-5472.CAN-12-4265. Epub 2013 May 6. PMID: 23650283; PMCID: PMC3686594.

In vivo study
N/A

7. Bioactivity
Biological target:

Product data sheet

BBT594 is a potent receptor tyrosine kinase RET inhibitor.

In vitro activity

In contrast, the same concentration range of type II JAK2 inhibitor BBT594 potently inhibited growth of *JAK2*-driven cell lines with an IC_{50} of 0.1 ± 0.005 μM in MHH-CALL-4 and 0.1± 0.008 μM in MUTZ-5 (Figure 1A-1B). In non–*JAK2*-driven REH cells, only high concentrations exceeding 1μM of BB T594 showed minimal growth-inhibitory effects, possible due to off-target activity (Supplementary Figure 1C).

Reference: Oncotarget. 2018 Jan 30; 9(8): 8027–8041. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5814279/

In vivo activity

N/A

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.