Acalabrutinib is a highly selective, potent (IC\textsubscript{50} = 3 nM), and irreversible inhibitor of Bruton's tyrosine kinase (BTK).\textsuperscript{1} Improved target selectivity (especially against TEC family kinases and EGFR) decreased the number of serious side effects observed with Ibrutinib.\textsuperscript{2} Acalabrutinib significantly inhibits BCR signaling, inhibits tumor proliferation, and reduces tumor burden.\textsuperscript{3} Clinically useful agent for treating B-cell cancers. BTK has also been shown to have a role in modulating the innate immune system, especially in dendritic cells and macrophages, suggesting a possible role in immunotherapy.\textsuperscript{4}

1) Wu et al. (2016), Acalabrutinib (ACP-196): a second-generation BTK inhibitor; J.Hematol.Oncol. 9 21
2) Barl et al. (2017), Acalabrutinib (ACP-196): A covalent Bruton Tyrosine Kinase Inhibitor with a Differentiated Selectivity and In Vivo Potency Profile; J.Pharmacol.Exp.Ther. 363 240
3) Herman et al. (2017), The Bruton's tyrosine kinase (BTK) inhibitor acalabrutinib demonstrates potent on-target effects and efficacy in two mouse models of chronic lymphocytic leukemia; Clin.Cancer Res. 23 2831
4) Weber et al. (2017), Bruton's Tyrosine Kinase: An Emerging Key Player in Innate Immunity; Front.Immunol. 8 1454

**PHYSICAL DATA**

- Molecular Weight: 465.52
- Molecular Formula: C\textsubscript{26}H\textsubscript{23}N\textsubscript{7}O\textsubscript{2}
- Purity: >98% by HPLC
  - NMR: (Conforms)
- Solubility: DMSO (>25 mg/ml)
- Physical Description: Yellow solid
- Storage and Stability: Store as supplied desiccated at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 1 month.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.