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# Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

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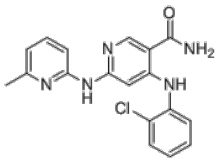
|---|---|---|
| **Product Name** | : | CEE321 |
| **Cat. No.** | : | PC-20143 |
| **CAS No.** | : | 2098545-89-0 |
| **Molecular Formula** | : | $C_{18}H_{16}ClN_5O$ |
| **Molecular Weight** | : | 353.81 |
| **Target** | : | JAK |
| **Solubility** | : | 10 mM in DMSO |



## Biological Activity

CEE321 (CEE-321) is a potent, selective **pan-JAK** inhibitor with IC50 of 50, 48, 59 and 48 nM for **JAK1**, **JAK2**, **JAK3** and **TYK2**, respectively.
CEE321 potently inhibited JAK-dependent STAT phosphorylation upon stimulation with IL15 or IFNα with IC50 of 54 and 85 nM in cellular assays, respectively.
CEE321 displayed high selectivity across 66 kinases in enzymatic assays, only MAP4K4 (110 nM) and GSK3B (380 nM) have IC50 values <500 nM.
CEE321 (1-10 uM) reduced the production of TARC (CCL17) in skin immersion culture assays, a biomarker associated with atopic dermatitis (AD).
CEE321 significantly inhibited the expression of TARC, MMP12 and Eotaxin 3 (CCL26) in fresh human skin in Franz cells.
CEE321 (Cream formulation of 0.2% CEE321) efficiently and statistically significantly suppressed IL4 and IL13-induced STAT6 phosphorylation and MMP12 gene expression.
CEE321 exhibited high hepatic clearance, promising potency in cellular assays but limited potency in the presence of blood, topical administration CEE321 to minipigs led to very limited systemic exposure.

## References

Thoma G, et al. ***J Med Chem***. 2023 Feb 9;66(3):2161-2168.

**Caution: Product has not been fully validated for medical applications. Lab Use Only!**

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