

Apremilast (CC-10004)

Catalog #: 27735-1

Lot #: 220802

Size: 5 mg

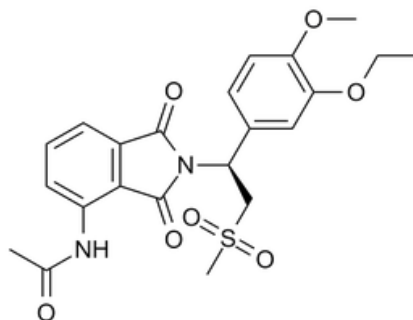
Structure:

CAS Registry #: 608141-41-9

Purity: ≥98%

Chemical Formula: C₂₂H₂₄N₂O₇S

Molecular Weight: 460.5



Description: Apremilast, also known as CC-10004, is a novel and potent small-molecule inhibitor of phosphodiesterase 4 (PDE4), a key enzyme involved in cyclic adenosine monophosphate (cAMP) degradation and cytokine production of inflammatory cells.

Biological Activity: Apremilast binds to the catalytic site of PDE4, with values of inhibition constant IC₅₀ and affinity constant K_{iof} of 0.074 μM and 68 nM respectively, consequently leading to the degradation of cAMP. Apremilast exhibits anti-inflammatory activities against inflammatory disease in animal models as well as human chronic inflammatory diseases (such as psoriasis and psoriatic arthritis) by blocking the synthesis of a range of pro-inflammatory cytokines and chemokines, including tumor necrosis factor alpha, interleukin 23, CXCL9 and CXCL10.

Synonym: Apremilast; CC-10004; N-[2-[(1S)-1-(3-ethoxy-4-methoxyphenyl)-2-methylsulfonylpropyl]-1,3-dioxoisoindol-4-yl]acetamide

Solubility: ≥23.05 mg/mL in DMSO; insoluble in H₂O; insoluble in EtOH. For obtaining a higher solubility, please warm the tube at 37°C and shake in the ultrasonic bath for a while.

Storage/Stability: Store at or below -20°C. Solid form is stable at least 12 months from date of receipt, when stored as directed. Do not store aqueous solutions for more than one day.

Reference(s): Schett, G., et al. Ther Adv Musculoskelet Dis. 2010; 2(5): 271-278.