

## Apremilast (CC-10004)

**Catalog #:** 27735-2

**Lot #:** 220802

**Size:** 25 mg

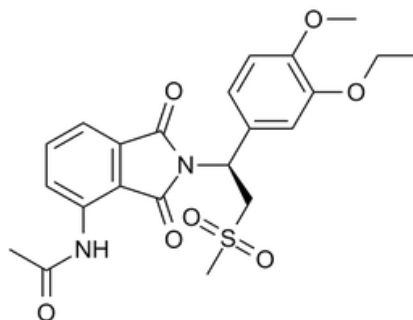
**Structure:**

**CAS Registry #:** 608141-41-9

**Purity:** ≥98%

**Chemical Formula:** C<sub>22</sub>H<sub>24</sub>N<sub>2</sub>O<sub>7</sub>S

**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 IC<sub>50</sub> and affinity constant K<sub>iof</sub> 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-methylsulfonylethyl]-1,3-dioxoisoindol-4-yl]acetamide

**Solubility:** ≥23.05 mg/mL in DMSO; insoluble in H<sub>2</sub>O; 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.