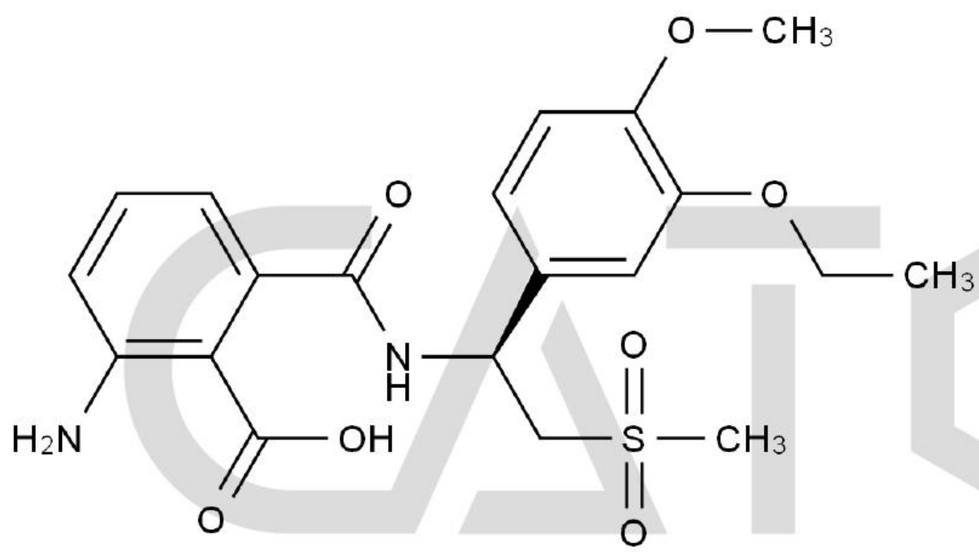
# Certificate of Analysis

## Reference Material & Standard

| | | | |
|---|---|---|---|
| **Product Name:** | Apremilast impurity 90 | **Catalogue Number:** | C4X-100990 |
| **Synonyms:** | N/A | **Lot Number:** | 1108-RH-0090 |
| **CAS Number:** | N/A | **Expiry Date:** | Oct 28, 2030 |
| **Molecular Formula:** | $C_{20}H_{24}N_2O_7S$ | **Storage:** | -20°C±5°C Protected from light and Sealed |
| **Molecular Weight:** | 436.48 | **Shipping Condition:** | Shipping with Ice Packs |
| | | **Warning:** |  |

**Chemical Structure:**




| Test Items | Method | Results |
|---|---|---|
| **Appearance** | Visual inspection | White Solid |
| **Identification** | LCMS&HNMR | Confirmed |
| **Purity** | HPLC | 99.5832% |
| **Loss on Drying** | TGA | 5.977% |
| **Assay** | Mass Balance | 93.6% |

## Comment:

*The calculation of the mass balance method follows the formula (calculated on the non-dried basis):*
*Assay (%) = (100%-Loss on Drying) * Purity HPLC (%) /100%*
*Loss on Drying is considered as absolute effect, HPLC purity is considered as relative effect.*

**Signature:**

Prepared by: Date: Nov 11, 2026

Reviewed by: Date: Nov 11, 2026

Approved by General Manager: Date: Nov 11, 2026

CATO Research Chemicals Inc.