**PRODUCT INFORMATION**

**AC-5216**

*Item No. 18522*

- **CAS Registry No.:** 226954-04-7
- **Formal Name:** N-ethyl-7,8-dihydro-7-methyl-8-oxo-2-phenyl-N-(phenylmethyl)-9H-purine-9-acetamide
- **Synonyms:** Emapunil, XBD-173
- **MF:** C_{23}H_{23}N_{5}O_{2}
- **FW:** 401.5
- **Purity:** ≥98%
- **Stability:** ≥2 years at -20°C
- **Supplied as:** A crystalline solid
- **UV/Vis.:** \( \lambda_{\text{max}} \) : 292 nm

**Laboratory Procedures**

For long term storage, we suggest that AC-5216 be stored as supplied at -20°C. It should be stable for at least two years.

AC-5216 is supplied as a crystalline solid. A stock solution may be made by dissolving the AC-5216 in the solvent of choice. AC-5216 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of AC-5216 in these solvents is approximately 5 and 30 mg/ml, respectively.

AC-5216 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AC-5216 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. AC-5216 has a solubility of approximately 0.05 mg/ml in a 1:20 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

**Description**

AC-5216 is a high affinity agonist of the 18 kDa translocator protein (TSPO, previously called the peripheral benzodiazepine receptor) that exhibits a \( K_i \) value of 0.297 nM in rat whole brain and IC\textsubscript{50} values of 2.73 and 3.04 nM, respectively, against human and rat glial TSPO.\textsuperscript{1} AC-5216 produces anxiolytic and antidepressant effects in various animal models, without inducing benzodiazepine-like adverse effects.\textsuperscript{1,2}

**References**