Product Data Sheet

Chemical Properties

Product Name: Tanaproget

Cas No.: 304853-42-7

M.Wt: 297.37

Formula: C16H15N3OS

Synonyms: NSP-989; NSP 989; NSP989

Chemical Name: 5-(4,4-dimethyl-2-sulfanylidene-1H-3,1-benzoxazin-6-yl)-1-methylpyrrole-2-carbonitrile

Canonical SMILES: CC1(C2=C(C=CC(N3C)C#N)NC(=S)O1)C

Solubility: Soluble in DMSO

Storage: Store at -20°C

General tips: For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shopping Condition: Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request

Biological Activity

Targets: Endocrinology and Hormones

Pathways: Estrogen/progestogen Receptor

Description:
Tanaproget is a novel agonist of progesterone receptor with IC50 of 1.7 nM [1]. Progesterone receptor (PR) is a member of the nuclear receptor superfamily and binding of progesterone causes PR conformational changes, which then changing gene expression. Progesterone plays an important role in female reproduction [1]. In T47D cells, tanaproget caused alkaline phosphatase activity with EC50 value of 0.1 nM. In a mammalian two-hybrid assay, tanaproget showed 50-fold more potent than progesterone. In
stromal cells isolated from endometrial, tanaproget (1 nM) significantly suppressed pro-MMP-3 secretion. Also, Tanaproget effectively prevented pro-MMP-3 secretion through IL-1α-mediated stimulation [2].

In endometriosis mice model with human lesions growing on the parietal peritoneum of mice, tanaproget completely regressed human lesions in 58% treated animals. Also, the lesions were smaller and fewer compared with the lesions in placebo-treated mice at the end of therapy [2].

In healthy women, the elimination half-life (t(1/2)) of tanaproget ranged from 12 to 30 h. Tanaproget reduced cervical mucus scores, which suggesting poor production and quality of cervical mucus [3].

Reference:

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.