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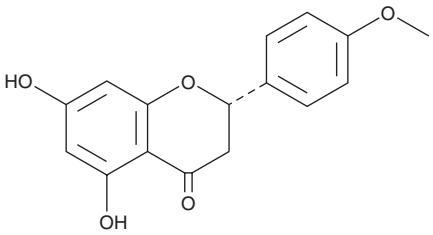
PRODUCT INFORMATION

Isosakuranetin

Item No. 25198

CAS Registry No.: 480-43-3
Formal Name: (2S)-2,3-dihydro-5,7-dihydroxy-2-(4-methoxyphenyl)-4H-1-benzopyran-4-one
MF: $C_{16}H_{14}O_5$
FW: 286.3
Purity: ≥98%
UV/Vis.: λ_{max}: 211, 226, 289 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Isosakuranetin is supplied as a crystalline solid. A stock solution may be made by dissolving the isosakuranetin in the solvent of choice. Isosakuranetin is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of isosakuranetin in these solvents is approximately 25 and 30 mg/ml, respectively.

Isosakuranetin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, isosakuranetin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Isosakuranetin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Isosakuranetin is a flavanone that has been found in *Citrus* species and has diverse biological activities.[1-7] It inhibits calcium uptake induced by pregnenolone sulfate (PregS; Item No. 21004) in HEK293 cells expressing mouse transient receptor potential melastatin 3 (TRPM3; IC_{50} = 50 nM).[1] Isosakuranetin is selective for TRPM3 over TRPM1, TRPM8, and TRP vanilloid-related 1 (TRPV1) when used at a concentration of 10 µM. *In vivo*, isosakuranetin (2 mg/kg) increases latency to first pain-related response in mice in a hot plate test and reduces the number and duration of PregS-induced nocifensive responses, such as paw licking, shaking, or lifting, in mice. It also reduces systolic blood pressure in spontaneously hypertensive rats when administered at a dose of 10 mg/kg.[2] Isosakuranetin (20 µM) inhibits UV-B-induced matrix metalloproteinase-1 (MMP-1) expression by 90% in HaCaT human keratinocyte cells, as well as phosphorylation of ERK1/2 when used at a concentration of 50 µM.[3] It blocks hydrogen peroxide-induced increases in reactive oxygen species (ROS), intracellular calcium concentration, caspase-3 activity, and JNK phosphorylation, as well as decreases in catalase activity, in PC12 cells when used at a concentration of 0.8 µM.[4] Isosakuranetin also has antibacterial and trypanocidal activity against *M. tuberculosis*, *C. neoformans*, and *T. cruzi*.[5-7]

References

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