NQ301

Cat. No.: HY-101054
CAS No.: 130089-98-4
Molecular Formula: C₁₈H₁₂ClNO₃
Molecular Weight: 325.75
Target: Thrombin
Pathway: Metabolic Enzyme/Protease
Storage: Powder
-20°C 3 years
4°C 2 years
In solvent
-80°C 6 months
-20°C 1 month

**SOLVENT & SOLUBILITY**

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass (1 mg)</th>
<th>Mass (5 mg)</th>
<th>Mass (10 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing Stock Solutions</td>
<td></td>
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<tr>
<td>DMSO</td>
<td>≥ 29 mg/mL (89.03 mM)</td>
<td><em>“≥” means soluble, but saturation unknown.</em></td>
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</tbody>
</table>

In Vitro

NQ301 is an antithrombotic agent; inhibits collagen-challenged rabbit platelet aggregation with an IC₅₀ of 10 mg/mL.

**BIOLOGICAL ACTIVITY**

Description

NQ301 concentration-dependently inhibits collagen (10 mg/mL)-, U46619 (1 mg/mL)- and arachidonic acid (100 mg/mL)-challenged rabbit platelet aggregation, with IC₅₀ values of 0.60±0.02, 0.58±0.04 and 0.78±0.04 μM, respectively. NQ301 potently suppresses thromboxane B₂ formation by platelets that are exposed to arachidonic acid in a concentration-dependent manner, but had no effect on the production of prostaglandin D₂, indicating an inhibitory effect on thromboxane A₂ synthase. NQ301 has a potential to inhibit thromboxane A₂ synthase activity with thromboxane A₂/prostaglandin H₂ receptor blockade, and modulate arachidonic acid liberation as well as 12-hydroxy-5,8,10,14-eicosatetraenoic acid formation in platelets[1]. NQ301 inhibits platelet aggregation by suppression...
of the intracellular pathway, rather than by direct inhibition of fibrinogen-GPIIb/IIIa complex binding. NQ301 significantly inhibits the increase of cytosolic Ca\textsuperscript{2+} concentration and ATP secretion, and also significantly increases platelet cAMP levels in the activated platelets. The antiplatelet activity of NQ301 may be mediated by inhibition of cytosolic Ca\textsuperscript{2+} mobilization, enhancement of cAMP production and inhibition of ATP secretion in activated platelets\textsuperscript{[2]}. 

**PROTOCOL**

**Cell Assay**\textsuperscript{[1]}  

Fresh rabbit platelet suspension is challenged by addition of collagen (10 mg/mL), arachidonic acid (100 μM) or U46619 (1 μM). Concentration-response relationship is determined in the absence or presence of a range of concentrations of NQ301 (0, 0.25, 0.5, 0.75, 1 μM); aspirin-treated platelets (50 μM for 5 min) are used to prevent any possible contribution of endogenous arachidonic acid metabolites to platelet aggregation. The resulting aggregation, measured as the change in light transmission, is recorded for 5 min. The extent of platelet aggregation is expressed as % of the control\textsuperscript{[1]}. 

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**REFERENCES**


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**Caution:** Product has not been fully validated for medical applications. For research use only.

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