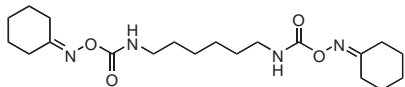


## RHC 80267: Diacylglycerol lipase inhibitor

Prod. No. **R 2028**



Diacylglycerol (DAG) is generated by the hydrolysis of phosphatidylinositol (PI) and phosphatidylcholine (PC) by phospholipase C (PLC) [1,2]. As a second messenger, DAG mediates the actions of a large number of hormones and cytokines by activating protein kinase C (PKC) and a sustained elevation in intracellular DAG is believed to be responsible for neoplastic transformation [1,2]. DAG lipase converts DAG to monoacylglycerols and fatty acids and thus can attenuate DAG levels [1]. RHC 80267 is a new tool from Sigma-RBI that selectively inhibits DAG lipase activity and thus can be used to control the endogenous production of DAG as well as PKC activation.

RHC 80267 has been shown to inhibit DAG lipase activity with an  $IC_{50}$  values of 1.1  $\mu$ M [3] and 4  $\mu$ M [4] in rat cardiac myocyte homogenates and in canine platelets, respectively. In addition, RHC-80267 (50  $\mu$ M) has been used to increase the frequency of slow potentials in circular smooth muscle of the guinea-pig gastric antrum. This effect is believed to be mediated by PKC and supports the idea that PKC is one of the important factors that determines the frequency of spontaneous activity in gastric smooth muscle [5].

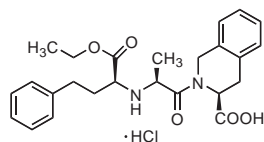
Taken together, RHC 80267 should serve as a useful tool with which to influence the levels of endogenous DAG as well as to study the effect of DAG on the activation of PKC.

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- Suzuki, H., et al., Effects of RHC-80267, an inhibitor of diacylglycerol lipase, on excitation of circular smooth muscle of the guinea-pig gastric antrum., *J. Smooth Muscle Res.*, **38**, 153-164 (2002).
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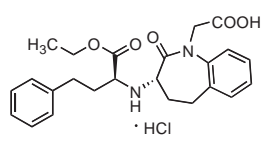
## Angiotensin Converting Enzyme (ACE) Inhibitors

Prod. Nos. **Q 0632** and **B 0935**



**Quinapril**

Short-acting ACE inhibitor



**Benazepril**

Long-acting ACE inhibitor

### References

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## Monoclonal Anti-Endothelial Cell Protein C Receptor (EPCR): Regulator of protein C anticoagulation pathway

Prod. No. **E 6280**

Clone RCR-252, developed in rat

Purified rat immunoglobulin in phosphate-buffered saline

*Immunogen*: human EPCR-positive RE-1 cells [1]

*Isotype*: IgG1

*Species Reactivity*: Human

The blood clotting cascade is a highly controlled mechanism that is linked to many serious medical conditions, including heart attack, stroke, pulmonary embolism, venous thrombosis (phlebitis) and sepsis. Blood coagulation requires on a series of sequential proteolytic processes, leading to the generation of active serine proteases. The protein C anticoagulant pathway is a natural anticoagulant mechanism for balancing the clotting system. In this pathway, thrombin binds to thrombomodulin on the surface of endothelial cells and activates the nearby protein C bound endothelial cell protein C receptor (EPCR). Activated protein C (APC) then activates protease-activated receptor 1 (PAR1).

EPCR, also known as CD201, is a member of the CD1 MHC superfamily and binds protein C in a calcium-dependent manner. The protein C pathway also plays a role in a natural defense mechanism in inflammation. EPCR is located on hematopoietic stem cells at reasonably high concentrations. Complete deletion of EPCR function results in embryonic death.

For flow cytometry applications, a working concentration of 5-20  $\mu$ g/ml using HUVEC cells is recommended. In addition, the antibody blocks the binding of the APC ligand to the EPCR [1,2].

EPCR is being increasingly recognized as an important regulator of the protein C anticoagulation pathway and monoclonal anti-EPCR will provide a useful tool with which to further delineate its function.

### References

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- Shua, F., et al., Activated protein C suppresses tissue factor expression on U937 cells in the endothelial protein C receptor-dependent manner., *FEBS Lett.*, **477**, 208-212 (2000).

Related Antibodies	Application	Prod. No.
Monoclonal Anti-Endothelial Cell Protein C Receptor (EPCR) Clone RCR-379 (rat)	FACS, Immunohistochemistry (frozen tissue)	<b>E 6405</b>
Monoclonal Anti-Factor VII Clone HVII-2 (mouse)	Immunoblotting, ELISA	<b>F 8271</b>
Monoclonal Anti-Factor VII Clone HVII-1 (mouse)	Immunoblotting, ELISA	<b>F 8146</b>
Monoclonal Anti-Factor IX Clone HIX-5 (mouse)	Immunoblotting ELISA	<b>F 1020</b>
Monoclonal Anti-Factor IX Clone HIX-1 (mouse)	Immunoblotting ELISA	<b>F 2645</b>
Anti-Factor IX (rabbit)	Immunoblotting Dot Blotting	<b>F 0652</b>
Monoclonal Anti-Protein C Clone HC-2 (mouse)	Immunoblotting	<b>P 5305</b>
Monoclonal Anti-Protein C Clone HC-4 (mouse)	Immunoblotting ELISA	<b>P 7058</b>
Monoclonal Anti-Protein S Clone HS-3 (mouse)	Immunoblotting ELISA	<b>P 5180</b>
Anti-Protein S (rabbit)	Immunoblotting	<b>P 4555</b>