鉄は酸化ストレス依存的低酸素誘導因子2α不活性化を介してエリスロポエチンの発現を抑制する

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Lab Invest. **97**(5), 555-566 (2017)

Iron suppresses erythropoietin expression via oxidative stress-dependent hypoxia-inducible factor-2 alpha inactivation.

Oshima K[1,2], Ikeda Y[1], Horinouchi Y[1], Watanabe H[3], Hamano H[1,4], Kihira Y[1,5], Kishi S[6], Izawa-Ishizawa Y[1], Miyamoto L[7], Hirayama T[8], Nagasawa H[8], Ishizawa K[2], Tsuchiya K[7], Tamaki T[1,4].

ABSTRACT: Antioxidant activities of the simple phenolic carbazoles **5-11** were evaluated by 2,2-diphenyl-1-picrylhydrazyl and 2,2’-azinobis-(3-ethylbenzthiazoline-6-sulfonate)+ radical scavenging assays. The simple phenolic carbazoles **5-7, 9,** and **11** exhibited stronger antioxidant activities than α-tocopherol, and similar antioxidant activities as phenolic carbazole alkaloids carazostatin (**1**), and carbazomadurins A (**3**) and B (**4**). Bond dissociation energies and highest occupied molecule orbital energy levels of a series of phenolic carbazoles including phenolic carbazole alkaloids were calculated. The reducing ability of the phenolic carbazole core could be important role for the antioxidant activity of carbazole alkaloids **1, 3,** and **4**.

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