

PubMed

Black cohosh (Actaea racemosa, Cimicifuga racemosa) behaves as a mixed competitive ligand and partial agonist at the human mu opiate receptor

Display Settings: Abstract

Full text links

J Agric Food Chem. 2006 Dec 27;54(26):9852-7.



## Black cohosh (Actaea racemosa, Cimicifuga racemosa) behaves as a mixed competitive ligand and partial agonist at the human mu opiate receptor.

Rhyu MR<sup>1</sup>, Lu J, Webster DE, Fabricant DS, Farnsworth NR, Wang ZJ.

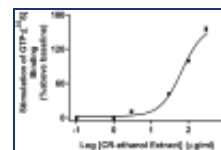
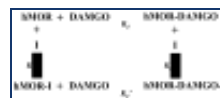
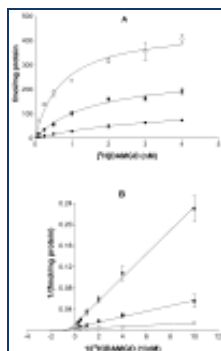
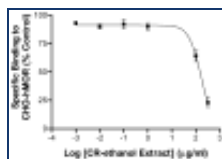
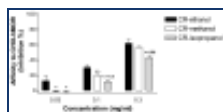
### Author information

### Abstract

**Black cohosh** is a commonly used botanical dietary supplement for the treatment of climacteric complaints. Because the **opiate** system in the brain is intimately associated with mood, temperature, and sex hormonal levels, the activity of **black cohosh** extracts at the **human mu opiate receptor** (hMOR) expressed in Chinese hamster ovary cells was investigated. The 100% methanol, 75% ethanol, and 40% 2-propanol extracts of **black cohosh** effectively displaced the specific binding of [3H]DAMGO to hMOR. Further studies of the clinically used ethanol extract indicated that **black cohosh** acted as a **mixed competitive ligand**, displacing 77 +/- 4% [3H]DAMGO to hMOR ( $K_i = 62.9$  microg/mL). Using the [35S]GTPgammaS assay, the action of **black cohosh** was found to be consistent with an **agonist**, with an EC<sub>50</sub> of 68.8 +/- 7.7 microg/mL. These results demonstrate for the first time that **black cohosh** contains active principle(s) that activate hMOR, supporting its beneficial role in alleviating menopausal symptoms.

PMID: 17177511 [PubMed - indexed for MEDLINE] PMID: PMC2547488 [Free PMC Article](#)

### Images from this publication. [See all images \(5\)](#) [Free text](#)



Publication Types, MeSH Terms, Substances, Grant Support

LinkOut - more resources