# Chloroquine (HYB 317-01): sc-57681



The Power to Question

## **BACKGROUND**

Chloroquine is a 4-aminoquinoline drug that is used in the treatment or prevention of malaria. The drug becomes protonated in the red blood cells of the host and caps hemozoin molecules to prevent further polymerization of heme, thus leading to heme build up. Chloroquine binds to heme to form what is known as the FP-Chloroquine complex, which is highly toxic to the cell and disrupts membrane function, resulting in cell lysis and ultimately in parasite cell autodigestion. Chloroquine is also effective against rheumatoid arthritis by inhibiting lymphocyte proliferation, phospholipase A, release of enzymes from lysosomes, release of reactive oxygen species from macrophages and production of IL-1. It has a very high volume of distribution, as it diffuses into the adipose tissue of the body. Common side effects of Chloroquine include gastrointestinal problems such as stomach ache, itch, headache and blurred vision.

# **REFERENCES**

- 1. Adam, I., Ibrahim, M.H., A/elbasit, I.A. and Elbashir, M.I. 2005. Low-dose quinine for treatment of chloroquine-resistant falciparum malaria in Sudanese pregnant women. East. Mediterr. Health J.10: 554-559.
- Ehrhardt, S., Mockenhaupt, F.P., Eggelte, T.A., Agana-Nsiire, P., Stollberg, K., Anemana, S.D., Otchwemah, R.N. and Bienzle, U. 2005. Chloroquine blood concentration Plasmodium falciparum in febrile children in northern Ghana. Trans. R. Soc. Trop. Med. Hyg. 97: 697-701.
- Gil, V.S., Ferreira, M.C., d'Alva, F.S., d'Abreu, J.A., Will, I.M., Gomes, M.L., Castelli, F., Taylor, W.R., Olliaro, P. and D'Alessandro, U. 2005. Efficacy of artesunate plus chloroquine for uncomplicated malaria in children in Sao Tome and Principe: a double-blind, randomized, controlled trial. Trans. R. Soc. Trop. Med. Hyg. 97: 703-706.
- Mubyazi, G.M. and Gonzalez-Block, M.A. 2005. Research influence on antimalarial drug policy change in Tanzania: case study of replacing chloroquine with sulfadoxine-pyrimethamine as the first-line drug. Malar. J. 4:51.
- Tzekov, R. 2005. Ocular toxicity due to chloroquine and hydroxychloroquine: electrophysiological and visual function correlates. Doc. Ophthalmol. 110: 111-120.
- Henry, M., Alibert, S., Orlandi-Pradines, E., Bogreau, H., Fusai, T., Rogier, C., Barbe, J. and Pradines, B. 2006. Chloroquine resistance reversal agents as promising antimalarial drugs. Curr. Drug Targets 7: 935-948.
- 7. Rustogi, A., Munshi, A. and Jalali, R. 2006. Unexpected skin reaction induced by radiotherapy after chloroquine use. Lancet Oncol. 7: 608-609.
- Savarino, A., Lucia, MB., Giordano, F. and Cauda, R. 2006. Risks and benefits of chloroquine use in anticancer strategies. Lancet Oncol. 7: 792-793.
- 9. Vogel, G. 2006. Malaria. Chloroquine makes a comeback. Science 314: 904.

# **SOURCE**

Chloroquine (HYB 317-01) is a mouse monoclonal antibody raised against Chloroquine coupled to an immunogenic carrier protein.

#### **PRODUCT**

Each vial contains 100  $\mu g$   $lgG_{2a}$  in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## **APPLICATIONS**

Chloroquine (HYB 317-01) is recommended for detection of Chloroquine by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other antimalarial drugs.

### **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## **RESEARCH USE**

For research use only, not for use in diagnostic procedures

# **PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

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