# Quinacrine Inhibitor

**Catalog No:** NBP2-29385  
**Content:** 200 mg  
**Storage:** The solid powder is stable in the desiccators at room temperature for 1 year. Water-reconstituted quinacrine solution is stable for up to 1 month at 4°C.  
**Species Reactivity:** N/A  
**Form:** Yellow Solid (Powder)  
**Inhibitor Mechanism:** Endosomal toll-like receptor inhibitor (antagonist); Inhibitor of endosomal acidification on which functional activity of endosomal TLRs (particularly TLR9 and TLR3) is dependent.

## Background
Quinacrine is a weak base which can partition into acidic vesicles such as endosomes and lysosomes, resulting in inhibition of endosomal acidification and lysosomal enzyme activity. Because acidic pH of endosomes is a prerequisite of endosomal TLR activation, quinacrine can serve as an antagonist for endosomal TLRs. Quinacrine and its analog chloroquine are also known to act as therapeutic agents for autoimmune diseases such as rheumatoid arthritis and systemic lupus erythematosus, of which therapeutic activity is due to suppression of TLR9 activity as shown by researchers.

## Solubility
Deionized water

## Usage:
**Product Handling Protocol**

1. To make 100 mM stock solution, dissolve 200 mg quinacrine in 4.2 ml water by gentle vortex.  
2. Filter sterilize through a 0.22 um filter.  
3. Store at 4°C (Note: Quinacrine solution is light sensitive.).  
4. For TLR signaling inhibition study, perform a pilot inhibitory test with the different concentrations of quinacrine ranging from 1 to 10 uM to optimize your experiments.

*Note: See our validation tests using the NBP2-26280 (quinacrine sensitive) and NBP2-26274 (quinacrine insensitive) cell lines as shown in Figures 1 and 2.*

Research purposes only. Not for diagnostic or use in human. For use in animal, follow your Institution’s Animal Handling Policy.
Reference:

