# Cytosense LI ™

- **Cytosense LI ™** is a highly specific fluorescent iron sensor that readily enters the cells and resides exclusively in the cytosol where it provides a sensitive evaluation of the cytosolic labile iron pool by virtue of an attached iron chelating residue that has high specificity and affinity for iron (**Figure 1**).

- Loading of cells with iron reduces the fluorescence signal of **Cytosense LI** ™ and when the added iron is chelated by an iron chelator ( e.g. deferiprone in **Figures 2 & 3**), the fluorescence is reinstated.
- Cytosense LI ™ has been utilised to evaluate the level of cytosolic labile iron of human primary skin fibroblasts (**Figure 4**).

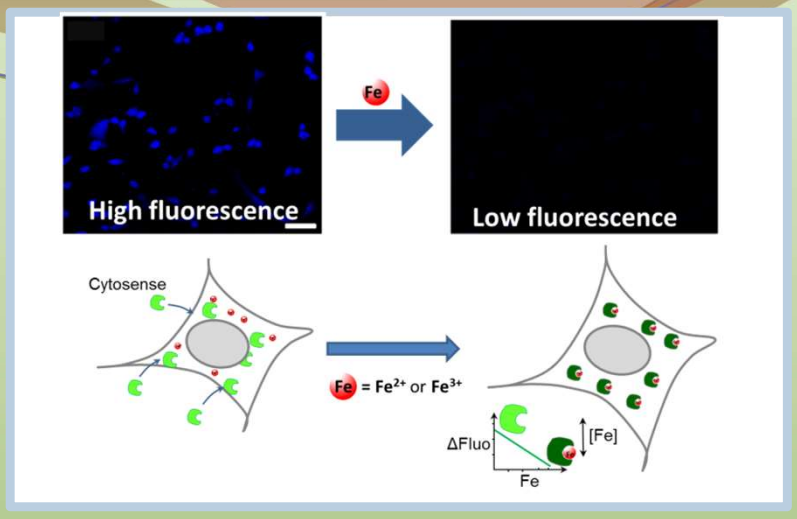


**Figure 1.** Schematic diagram illustrating the mechanism of action of **Cytosense LI ™ .**

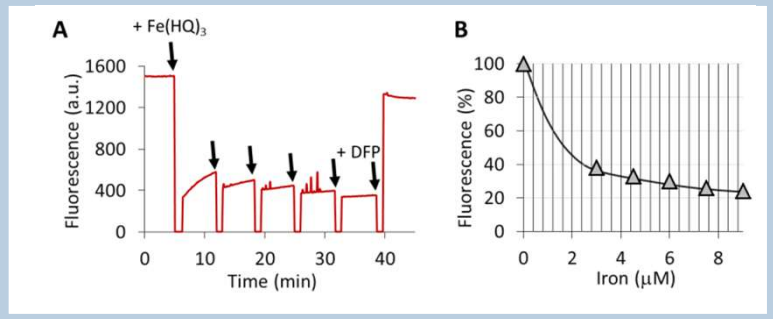


**Figure 2. Cytosense LI ™ responds to the modulation of intracellular levels of iron. (A)** Following treatment of skin fibroblasts with **Cytosense LI** ™ , incremental amounts of Fe(HQ)3 were added to the cells as indicated by the arrows and fluorescence of the cell suspension was monitored in time by spectrofluorimetry. Deferiprone (DFP) was then added to the cells as a bolus dose. A representative experiment is pictured. **(B)** Fluorescence profile represented as a function of [Fe3+].

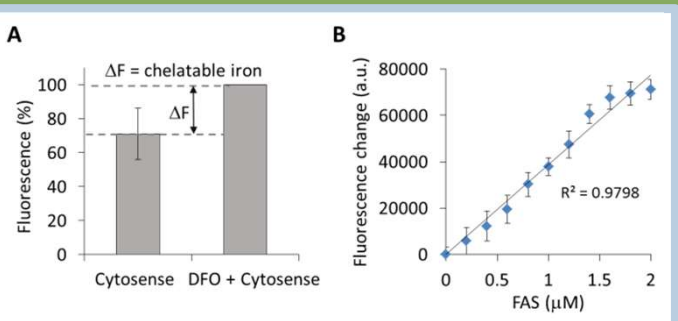


**Figure 4. Cytosense LI ™ was used for quantitative measurement of cytosolic labile iron in human skin fibroblasts.** The fluorescence difference of the two samples "Cytosense ± DFO" was converted to a concentration of cytosolic labile iron pool on the basis of an *ex situ* calibration curve .

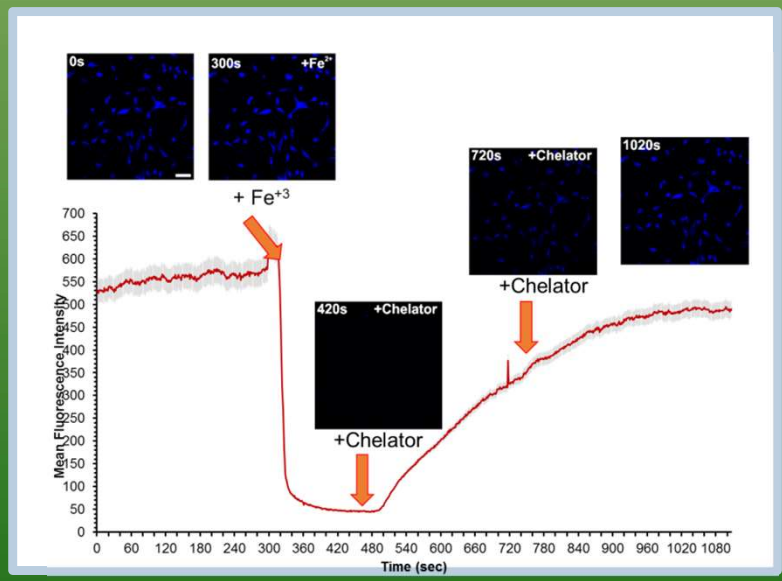


**Figure 3. Time-lapse fluorescence microscopy analysis of the response of Cytosense LI ™ to the modulation of intracellular levels of iron.**


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