

## Product Data Sheet

Product Name: ferritin heavy chain fragment [Multiple species]  
 Cat. No.: GP10146

### Chemical Properties

Cas. No.

SMILES NC(CC1=CC=C(O)C=C1)C(NC(CC(C)C)C(NC(CC(N)=O)C(NC(CCC(O)=O)C(NC(CCC(N)=O)C(NC(C(C)C)C(NC(CCCCN)C(NC(C)C(NC(C(C

Formula C<sub>49</sub>H<sub>80</sub>N<sub>12</sub>O<sub>15</sub>

M.Wt 1077.23

Solubility ≥ 107.7mg/mL in DMSO

Storage Store at -2

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

Sequence: H2N-YLNEQVKAI-OH

Ferritin is a protein of 450 kDa consisting of 24 subunits that is present in every cell type. In vertebrates, these subunits are both the light (L) and the heavy (H) type with an apparent molecular weight of 19 kDa or 21 kDa respectively; their sequences are about 50% homologous. [1] Heart, kidney, and placental ferritins are highly acidic because they are composed of mostly H chains [2]. The ferritin found in cancer cells was found to consist mainly of H chains [3][4].

The heavy chain of Ferritin also possesses ferroxidase activity, this involves the conversion of iron from the ferrous (Fe<sup>2+</sup>) to ferric (Fe<sup>3+</sup>) forms. This limits the deleterious reaction which occurs between ferrous iron and hydrogen peroxide known as the Fenton reaction which produces the highly damaging hydroxyl radical.

If the ferritin level is low, there is a risk for lack of iron, which could lead to anemia.[5] If ferritin is high, there is iron in excess or else there is an acute inflammatory reaction in which ferritin is mobilized without iron excess. For example, ferritins may be high in infection without signalling body iron overload. Ferritin is also used as a marker for iron overload disorders, such as hemochromatosis or hemosiderosis.[6] Recent research has shown that H-Ferritin from melanoma cells may suppress immune responses.[7]

### References:

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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