

# PRODUCT INFORMATION



## Ferritin Heavy Chain (human, recombinant)

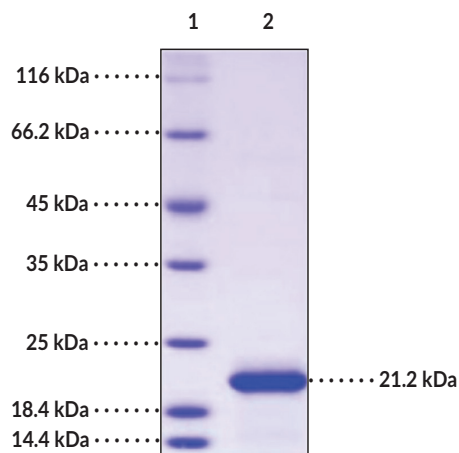
Item No. 32033

### Overview and Properties

**Synonyms:** Cell Proliferation-inducing Gene 15 Protein, Ferritin H Subunit, FTH1  
**Source:** Recombinant human ferritin heavy chain expressed in *E. coli*  
**Amino Acids:** 1-183 (full length)  
**Uniprot No.:** P02794  
**Molecular Weight:** 21.2 kDa  
**Storage:** -80°C (as supplied)  
**Stability:** ≥1 year  
**Purity:** ≥95% estimated by SDS-PAGE  
**Supplied in:** Lyophilized from sterile PBS, pH 7.5

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Image



Lane 1: MW Markers  
Lane 2: Ferritin Heavy Chain

SDS-PAGE Analysis of Ferritin Heavy Chain.

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
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## Description

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Ferritin is a spherical protein involved in iron storage and biomineralization.<sup>1,2</sup> It is primarily localized to the cytoplasm, but is also present in the mitochondria and nucleus, and is composed of 24 protein subunits with a tissue-specific ratio of ferritin heavy chains (FTH1s) to ferritin light chains (FTLs; Item No. 32032). FTH1 and FTL are nearly identical in overall conformation but only share approximately 50% sequence homology.<sup>3</sup> FTH1 functions as a ferroxidase that catalyzes the oxidation of Fe(II) to Fe(III) and FTL has roles in iron nucleation and protein stability. *FTH1* is overexpressed in acute myeloid leukemia and leukemic stem cells compared with normal hematopoietic stem cells.<sup>4</sup> Elevated levels of cytoplasmic and nuclear FTH1 are associated with a favorable and poor prognosis, respectively, in patients with triple negative breast cancer.<sup>5</sup> Point mutations in the 5'-UTR of *FTH1* mRNA have been found in individuals with autosomal dominant iron overload.<sup>6</sup> Disruption of *Fth1* is embryonic lethal in mice.<sup>7</sup> Cayman's Ferritin Heavy Chain (human, recombinant) protein consists of 183 amino acids and has an apparent molecular mass of 21.2 kDa by SDS-PAGE under reducing conditions.

## References

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7. Ferreira, C., Bucchini, D., Martin, M.E., *et al.* Early embryonic lethality of H ferritin gene deletion in mice. *J. Biol. Chem.* **275(5)**, 3021-3024 (2000).

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