

#3998 Store at -20C

## FTH1 Antibody



**Cell Signaling**  
TECHNOLOGY®

**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk	Endogenous	21	Rabbit	#P02794	2495

<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
<b>Specificity / Sensitivity</b>	FTH1 Antibody detects endogenous levels of total FTH1 protein. Nonspecific bands are seen above 80 kDa.	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino-terminal region of FTH1. Antibodies are purified by protein A and peptide affinity chromatography.	
<b>Background</b>	Ferritin (FTH) is a ubiquitous and highly conserved protein which plays a major role in iron homeostasis by sequestering and storing iron in a non-toxic and bioavailable form (1). The assembled ferritin molecule, often referred to as a nanocage, can store up to 4,500 atoms of iron (2,3). It forms a holoenzyme of ~450 kDa, consisting of 24 subunits made up of two types of polypeptide chains: ferritin heavy chain and ferritin light chain, each having unique functions. Ferritin heavy chains catalyze the first step in iron storage, the oxidation of Fe(II), whereas ferritin light chains promote the nucleation of ferrihydrite, enabling storage of Fe(III) (4). In addition to iron buffering, heavy chain ferritin also enhances thymidine biosynthesis (5). Serum ferritin levels serve as an indicator of the amount of iron stored in the body. Serum ferritin is the most sensitive test for anaemia. The level of serum ferritin is markedly elevated in inflammation, malignancy, and iron overload disorders (6). Research studies have found that defects in ferritin proteins are also associated with several neurodegenerative diseases (7).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>Munro, H.N. et al. (1988) <i>Ann N Y Acad Sci</i> 526, 113-23.</li> <li>Theil, E.C. (2004) <i>Annu Rev Nutr</i> 24, 327-43.</li> <li>Theil, E.C. et al. (2006) <i>J Biol Inorg Chem</i> 11, 803-10.</li> <li>Treffry, A. et al. (1992) <i>FEBS Lett</i> 302, 108-12.</li> <li>Oppenheim, E.W. et al. (2001) <i>J Biol Chem</i> 276, 19855-61.</li> <li>Tarng, D.C. (2009) <i>Nat Clin Pract Nephrol</i> 5, 66-7.</li> <li>Fischer, P. et al. (1997) <i>Life Sci</i> 60, 2273-8.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
<b>Applications Key</b>	<b>WB:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
<b>Trademarks and Patents</b>	Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. All other trademarks are the property of their respective owners. Visit <a href="http://cellsignal.com/trademarks">cellsignal.com/trademarks</a> for more information.
<b>Limited Uses</b>	Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in

writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.