

## Product datasheet for **AP02668PU-S**

### HDAC4 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IF, WB
Recommended Dilution:	Western blot: 1/500-1/1000. Immunofluorescence: 1/100-1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	The antiserum was produced against synthesized non-phosphopeptide derived from Human HDAC4 around the phosphorylation site of Serine 632 (A-Q-Sp-S-P).
Specificity:	This antibody AP02668PU detects endogenous levels of total HDAC4 protein.
Formulation:	PBS (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150 mM NaCl, 0.02% Sodium Azide and 50% Glycerol. State: Aff - Purified State: Liquid purified Ig fraction.
Concentration:	lot specific
Purification:	Immunoaffinity Chromatography using epitope-specific immunogen.
Conjugation:	Unconjugated
Storage:	Store the antibody (in aliquots) at -20°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: One year from despatch.
Gene Name:	histone deacetylase 4
Database Link:	<a href="#">Entrez Gene 9759 Human P56524</a>



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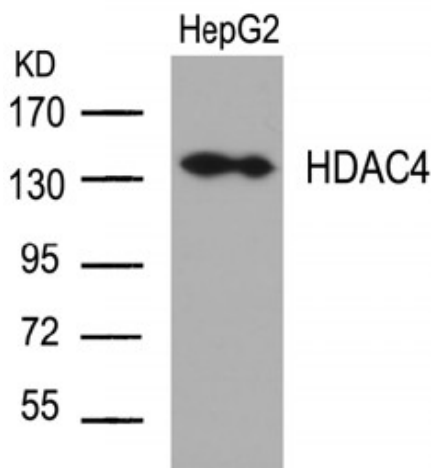
**Background:**

Chromatin is a highly specialized structure composed of tightly compacted chromosomal DNA. Gene expression within the nucleus is controlled, in part, by a host of protein complexes which continuously pack and unpack the chromosomal DNA. One of the known mechanisms of this packing and unpacking process involves the acetylation and deacetylation of the histone proteins comprising the nucleosomal core. Acetylated histone proteins confer accessibility of the DNA template to the transcriptional machinery for expression. Histone deacetylases (HDACs) are chromatin remodeling factors that deacetylate histone proteins and thus, may act as transcriptional repressors. HDACs are classified by their sequence homology to the yeast HDACs and there are currently 2 classes. Class I proteins are related to Rpd3 and members of class II resemble Hda1p.

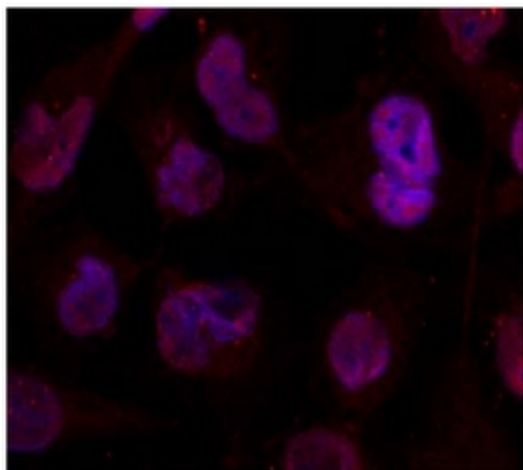
HDAC4 is a class II histone deacetylase containing 1084 amino acid residues. HDAC4 has been shown to interact with NCoR. HDAC4 is a member of the class II mammalian histone deacetylases, which consists of 1084 amino acid residues. Its C terminal sequence is highly similar to the deacetylase domain of yeast HDA1. HDAC4, unlike other deacetylases, shuttles between the nucleus and cytoplasm in a process involving active nuclear export. Association of HDAC4 with 14-3-3 results in sequestration of HDAC 4 protein in the cytoplasm. In the nucleus, HDAC4 associates with the myocyte enhancer factor MEF2A. Binding of HDAC4 to MEF2A results in the repression of MEF2A transcriptional activation. HDAC4 has also been shown to interact with other deacetylases such as HDAC3 as well as the corepressors NcoR and SMART.

**Synonyms:**

Histone deacetylase 4, HD4, KIAA0288

**Product images:**

Western Blot analysis of extracts from HepG2 cells using HDAC4 antibody



Immunofluorescence staining of methanol-fixed HeLa cells using HDAC4 antibody (Red).