

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Histone Deacetylase 4/HDAC4 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2A} Clone # 713802
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Histone Deacetylase 4/HDAC4 Met1-Glu68 Accession # P56524
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Immunohistochemistry Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Histone Deacetylase 4 (HDAC4; also HD4) is a founding member of the class IIa subfamily, histone deacetylase family of transcriptional regulators. Although its predicted MW is 119 kDa, it runs anomalously at 140-150 kDa in SDS-PAGE which may be due to extensive phosphorylation plus SUMOylation. It has an N-terminal region that interacts with transcription factors and corepressors, and a C-terminal domain that shows deacetylase activity, thus repressing gene transcription. HDAC4 is found in osteoblasts, cardiac and skeletal muscle cells, and neurons. Human HDAC4 is 1084 amino acids (aa) in length. It contains one coiled-coil region (aa 67-177), a SUMOylation site at Lys559, a histone deacetylation domain (aa 665-993) and one NES (aa 1051-1084). Caspase cleavage after Asp289 generates bioactive 97 and 34 kDa fragments. There is one potential splice variant that shows an alternative start site at Met118 coupled to a five aa insertion after Thr431. Over aa 1-68, human HDAC4 shares 96% aa identity with mouse HDAC4.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.