Data Sheet (Cat.No.TMPY-03431)

TargetMol

HDAC4 Protein, Human, Recombinant (aa 612-1084)

General Information

Synonyms:	histone deacetylase 4;HA6116;HDAC-4;HD4;BDMR;HDAC-A;AHO3;HDACA
Protein Construction:	A DNA sequence encoding the human HDAC4 (NP_006028.2)(Met612-Leu1084) was expressed and purified with two additional amino acids (Gly & Pro) at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P56524-1
Molecular Weight:	50.9 kDa (predicted); 51 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, pH 7.4, 10%gly. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

HDAC4 (histone deacetylase 4), belongs to class II of the histone deacetylase/AcuC/APhA family. Histone Deacetylases (HDACs) are a group of enzymes closely related to sirtuins. They catalyze the removal of acetyl groups from lysine residues in histones and non-histone proteins, resulting in transcriptional repression. In general, they do not act autonomously but as components of large multiprotein complexes, such as pRb-E2F and

mSin3A, that mediate important transcription regulatory pathways. There are three classes of HDACs; classes 1, 2, and 4, which are closely related to Zn2+-dependent enzymes. HDACs are ubiquitously expressed and they can exist in the nucleus or cytosol. Their subcellular localization is affected by protein-protein interactions and by the class to which they belong. HDACs have a role in cell growth arrest, differentiation, and death and this has led to substantial interest in HDAC inhibitors as possible antineoplastic agents. HDAC4 possesses histone deacetylase activity and represses transcription when tethered to a promoter. It does not bind DNA directly but through transcription factors MEF2C and MEF2D. HDAC4 seems to interact in a multiprotein complex with RbAp48 and HDAC3.

Reference

Geng H, et al. (2006) Soluble form of T cell Ig mucin 3 is an inhibitory molecule in T cell-mediated immune response. J Immunol. 176(3): 1411-20.

Anderson AC, et al. (2006) TIM-3 in autoimmunity. Curr Opin Immunol. 18(6): 665-9.

Anderson DE. (2007) TIM-3 as a therapeutic target in human inflammatory diseases. Expert Opin Ther Targets. 11 (8): 1005-9.

Pan HF, et al. (2010) TIM-3 as a new therapeutic target in systemic lupus erythematosus. Mol Biol Rep. 37(1): 395-8.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481