

HDAC11 (Strep) (Histone Deacetylase 11)

CATALOG NO.: KDA-21-381

LOT NO.:

DESCRIPTION: Human recombinant HDAC11 (residues 1-347; Genbank Accession # NM_024827; MW = 42.2 kDa), expressed with an N-terminal StrepII tag in an insect cell/baculovirus system. The sole human class IV HDAC^{1,2}, HDAC11 is among the most differentially overexpressed genes in several cancers, including mixed lobular and ductal breast and hepatocellular carcinomas³. MGCD0103 (Mocetinostat), an inhibitor HDACs 1-3 and HDAC11, is in clinical trials for various cancers and has been granted Orphan Drug Designation by the FDA for diffuse large B-cell lymphoma (DLBCL)⁴.

PURITY: >75% by SDS-PAGE

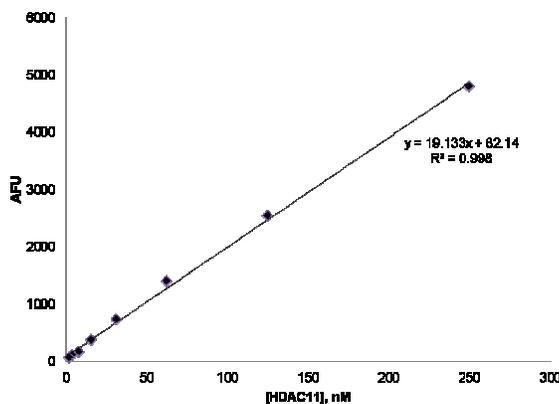
ASSAY CONDITIONS: RBC's HDAC11 displays deacetylase activity with the fluorogenic substrate Boc-Lys(TFA)-AMC. Reactions were performed at 37°C in 50 mM Tris-HCl, pH 8.0, 137 mM NaCl, 2.7 mM KCl, 1 mM MgCl₂, 1 mg/mL BSA. Reactions were stopped and fluorescence signals developed by addition of an equal volume of 'Developer' (16 mg/mL trypsin/2 μM trichostatin A in the same buffer). Fluorescence (Ex. 355 nm/Em. 460 nm) was read every 5 min., until signal stabilized, indicating that trypsin cleavage of the deacetylated peptide (Boc-Lys(TFA)-AMC), to release the AMC fluorophor was complete (<2 hrs.). (See figure, below.)

SUPPLIED AS: _ μg/μL in 50 mM Tris/HCl, pH 8.0, 500 mM NaCl, 10% glycerol (v/v) as determined by OD₂₈₀.

STORAGE: -70°C. Thaw quickly and store on ice before use. The remaining, unused, undiluted protein should be snap frozen, for example in a dry/ice ethanol bath or liquid nitrogen. Minimize freeze/thaws if possible, but very low volume aliquots (<5 μl) or storage of diluted enzyme is not recommended.

REFERENCES: 1) L Gao *et al. J. Biol. Chem.* 2002 **277** 25748; 2) I.V. Gregoretta *et al. J. Mol. Biol.* 2004 **338** 17; 3) H.E. Deubzer *et al. Int. J. Cancer* 2012 **132** 2200; 4) M. Fournel *et al. Mol. Cancer Therapy* 2008 **7** 759

Coomassie blue stained SDS-PAGE (4-12% acrylamide) of 4 μg of RBC HDAC11. MW markers (left) are, from top, 220, 160, 120, 100, 90, 80, 70, 60, **50**, 40, 30, 25, **20**, 15, 10 kDa.



HDAC11 Deacetylation Activity of Boc-Lys(TFA)-AMC. Varying amount of HDAC11 was incubated in 50 μL reactions (37°C) with 50 μM Boc-Lys(TFA)-AMC for 60 minutes. Reactions were stopped and signal developed as described above (**Assay Conditions**). Specific activity (11.9 pmol/min./μg) and turnover number (30.5 hr⁻¹) were calculated from the slope of the titration curve (19.1 AFU/nM) and the slope of a standard curve of AMC dilutions (626.24 AFU/μM).

This product is NOT intended for therapeutic or diagnostic use in animals or in humans.