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## Recombinant Human MMP-2 Protein(Halo Tag)

### Catalog Number: PDMH100466

Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description	
Species	Human
Source	Mammalian-derived Human MMP-2 proteins Ala30-Cys660, with an C-terminal Halo
Calculated MW	103.3 kDa
Observed MW	100-110 kDa
Accession	P08253
Bio-activity	Not validated for activity
Properties	
Purity	> 80% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80
	°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of
	reconstituted samples are stable at $< -20^{\circ}C$ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with 5% Trehalose and 5%
	Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of
	0.5 mg/mL. Concentration is measured by UV-Vis.

#### Data



SDS-PAGE analysis of Human MMP-2 proteins, 2µg/lane of Recombinant Human MMP-2 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 100-110 KD

### Background

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Matrix Metalloproteinase-2 (MMP-2) is an enzyme that degrades components of the extracellular matrix and thus plays a pivotal role in cell migration during physiological and pathological processes. MMP-2 expression is dependent on extracellular matrix metalloproteinase inducer (EMMPRIN); Her2/neu; growth factors; cytokines; and hormones. Pro-MMP-2 activation needs MT1-MMP and TIMP-2 contribution. MMP-2 is changed in distribution and increased in amount in the ventral cochlear nucleus after unilateral cochlear ablation. A low level of MMP-2 is linked to favorable prognosis in patients with a hormone receptor-negative tumor; usually associated with high risk. As a zymogen requiring proteolytic activation for catalytic activity; MMP-2 has been implicated broadly in the invasion and metastasis of many cancer model systems; including human breast cancer (HBC). Blocking MMP-2 alone or the rate of pro-MMP-2 and active MMP-2 is considered a very sensitive indicator of cancer metastasis. Modulation of MMP-2 expression and activation through specific inhibitors and activators may thus provide a new mechanism for breast cancer treatment.