

Product datasheet

Recombinant human MMP14 protein (Active) ab157068

Description

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| Product name | Recombinant human MMP14 protein (Active) |
| Biological activity | <p>≥140mU/mg protein.</p> <p>One unit is defined as the amount of enzyme that hydrolyzes 1μmol Mca-Pro-LeuGly-Leu-Dpa-Ala-Arg-NH₂ per min. at 37°C, pH 7.5</p> |
| Purity | > 90 % SDS-PAGE. |
| Expression system | Escherichia coli |
| Accession | <u>P50281</u> |
| Protein length | Protein fragment |
| Animal free | No |
| Nature | Recombinant |
| Species | Human |
| Sequence | <p>YAIQGLKWQHN EITFCIQNYT PKVGEYATYE</p> <p>AIRKAFRVWE SATPLRFREV PYAYIREGHE KQADIMIFFA</p> <p>EGFHGDSTPF DGEGGFLAHA YFPGPNIGGD</p> <p>THFDSAEPWT VRNEDLNGND IFLVAVHELG</p> <p>HALGLEHSSD PSAIMAPFYQ WMDTENFVLP</p> <p>DDDRRGIQQL YGGESG</p> |
| Predicted molecular weight | 20 kDa |
| Amino acids | 112 to 288 |

Specifications

Our **Abpromise guarantee** covers the use of **ab157068** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| | |
|-------------------------|--|
| Applications | <p>Functional Studies</p> <p>SDS-PAGE</p> |
| Form | Liquid |
| Additional notes | <p>Inhibitors: The catalytic domain of MMP-14 is inhibited by tissue inhibitors of MMP-2 and -3 (TIMP-2 and TIMP-3) and by chelators of divalent cations like EDTA or o-phenanthroline.</p> |

Preparation and Storage

Stability and Storage

Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle.

Constituents: 0.06% Calcium chloride, 0.79% Tris HCl, 0.87% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function

Seems to specifically activate progelatinase A. May thus trigger invasion by tumor cells by activating progelatinase A on the tumor cell surface. May be involved in actin cytoskeleton reorganization by cleaving PTK7.

Tissue specificity

Expressed in stromal cells of colon, breast, and head and neck. Expressed in lung tumors.

Sequence similarities

Belongs to the peptidase M10A family.

Contains 4 hemopexin-like domains.

Domain

The conserved cysteine present in the cysteine-switch motif binds the catalytic zinc ion, thus inhibiting the enzyme. The dissociation of the cysteine from the zinc ion upon the activation-peptide release activates the enzyme.

Post-translational modifications

The precursor is cleaved by a furin endopeptidase.

Cellular localization

Membrane. Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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