

## Active Recombinant Human ADAMTS4, His-tagged

**Cat. No.** ADAMTS4-533H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human ADAMTS-1 (residues 213 to 579 of full-length human ADAMTS-4) protein with His tag, was expressed in <i>abaculovirus</i> system and purified from insect cells, 40 kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>           | Insect Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Protein Length</b>   | 213-579 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>      | Aggrecanases belong to a family of ADAMTS proteases (ADAMTS = A disintegrin and metalloprotease with thrombospondin motifs). ADAMTS enzymes are comprised of an N-terminal prodomain, a catalytic domain, a disintegrin domain, one or more thrombospondin (TS) motifs, a cysteine-rich domain and a spacer domain of variable length. The prodomains are cleaved off intracellularly and the enzymes are processed further from their C-terminal ends after secretion. Aggrecanases are responsible for aggrecan degradation in osteoarthritic joints. ADAMTS-4 (aggrecanase-1) is a major aggrecanase in human osteoarthritic cartilage. <sup>5</sup> ADAMTS-4 hydrolyzes also versican and brevican. |
| <b>Activity</b>         | Activity (mU/mg) is specified on the vial.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Unit Definition</b>  | One milliunit of protease hydrolyzes 1 nanomole of aggrecan interglobular domain substrate per minute at pH 7.5 at 37°C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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|                    |                                                                                                                   |
|--------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>      | > 90% as estimated by SDS-PAGE.                                                                                   |
| <b>Formulation</b> | 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 5 mM CaCl <sub>2</sub> , 0.05% Brij-35.                                      |
| <b>Application</b> | Used for screening of ADAMTS-4 inhibitors and for continuous assay of ADAMTS-4 activity and for FRET-based assay. |
| <b>Storage</b>     | Store at -80°C. Avoid multiple thaw-freeze cycles.                                                                |

## GENE INFORMATION

|                            |                                                                                                                                                                                                                                                                                                                               |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | ADAMTS4 ADAM metalloproteinase with thrombospondin type 1 motif, 4 [ Homo sapiens ]                                                                                                                                                                                                                                           |
| <b>Synonyms</b>            | ADAM metalloproteinase with thrombospondin type 1 motif, 4; ADMP-1; ADAMTS-2; ADAMTS-4; KIAA0688; ADAMTS4; a disintegrin and metalloproteinase with thrombospondin motifs 4; ADAM-TS4; ADAM-TS 4; aggrecanase-1; a disintegrin-like and metalloproteinase (reprolysin type) with thrombospondin type 1 motif, 4; EC 3.4.24.82 |
| <b>Gene ID</b>             | 9507                                                                                                                                                                                                                                                                                                                          |
| <b>mRNA Refseq</b>         | NM_005099                                                                                                                                                                                                                                                                                                                     |
| <b>Protein Refseq</b>      | NP_005090                                                                                                                                                                                                                                                                                                                     |
| <b>MIM</b>                 | 603876                                                                                                                                                                                                                                                                                                                        |
| <b>UniProt ID</b>          | O75173                                                                                                                                                                                                                                                                                                                        |
| <b>Chromosome Location</b> | 1q21-q23                                                                                                                                                                                                                                                                                                                      |

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**Function**

metal ion binding; metalloendopeptidase activity; metallopeptidase activity; peptidase activity; protease binding; zinc ion binding

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