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# Product datasheet for AM32237PU-N

## Collagen I (COL1A1) (+ type II and III) Mouse Monoclonal Antibody [Clone ID: MCI-HA]

### Product data:

| | |
|---|---|
| **Product Type:** | Primary Antibodies |
| **Clone Name:** | MCI-HA |
| **Applications:** | ELISA, IHC |
| **Recommended Dilution:** | **ELISA:** 1/1000. The antibody can also used for quantitative Sandwich ELISA to determine concentrations of interstitial Collagens in Human fluid (in combination with polyclonal type specific antibodies).<br>**Immunohistochemistry on Frozen Sectrions:** 1/20. The antibody is useful for staining of interstitial Collagens (I, II, III) on cryostat sections of Human sections. |
| **Reactivity:** | Human |
| **Host:** | Mouse |
| **Isotype:** | IgM |
| **Clonality:** | Monoclonal |
| **Specificity:** | The antibody clone *MCI-HA* reacts with native as well as with heat denatured Human Collagen types I, II, III, in RIA, ELISA.<br>It does not react with other Collagen types (IV and V).<br>Human plasma proteins do not interfere with binding to Collagen. |
| **Formulation:** | State: Purified<br>State: Lyophilized purified ascites |
| **Reconstitution Method:** | Restore with 1 ml distilled water. Add preservative if preferred. |
| **Purification:** | PEG6000 Precipitation and Sepharose 6B Gel Filtration |
| **Conjugation:** | Unconjugated |
| **Storage:** | Store the antibody undiluted at 2-8°C. |
| **Stability:** | Shelf life: one year from despatch. |
| **Gene Name:** | collagen type I alpha 1 |
| **Database Link:** | Entrez Gene 1277 Human<br>P02452 |

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**Background:** Collagen I is a fibrillar collagen found in most connective tissues, and the only component of the collagen found in cartilage. Mutations in this gene are associated with osteogenesis imperfecta, Ehlers Danlos syndrome, and idiopathic osteoporosis. Reciprocal translocations between chromosomes 17 and 22, where this gene and the gene for platelet derived growth factor beta are located, are associated with a particular type of skin tumor called dermatofibrosarcoma protuberans, resulting from unregulated expression of the growth factor. Two transcripts, resulting from the use of alternate polyadenylation signals, have been identified for this gene. Type II collagen is a fibrillar collagen found in cartilage and the vitreous humor of the eye. Collagen type II is essential for the normal embryonic development of the skeleton, for linear growth and for the ability of cartilage to resist compressive forces. Mutations in this gene are associated with achondrogenesis, chondrodysplasia, early onset familial osteoarthritis, SED congenita, Langer Saldino achondrogenesis, Kniest dysplasia, Stickler syndrome type I, and spondyloepimetaphyseal dysplasia Strudwick type. In addition, defects in processing chondrocalcin, a calcium binding protein that is the C propeptide of this collagen molecule, are also associated with chondrodysplasia. There are two transcripts identified for this gene. Collagen III is a fibrillar collagen that is found in extensible connective tissues such as skin, lung, and the vascular system, frequently in association with Collagen I. Mutations in this gene are associated with Ehlers Danlos syndrome type IV, and with aortic and arterial aneurysms. Although alternate transcripts have been detected for this gene, they are the result of mutations; these mutations alter splicing, often leading to the exclusion of multiple exons.

**Synonyms:** COL1A1, COL1A2, Alpha-1 type I collagen, Alpha-2 type I collagen