



# Human Casein

**Product Code** CSB-NP008801h

**Relevance** Casein contains a fairly high number of proline residues, which do not interact. There are also no disulfide bridges. As a result, it has relatively little tertiary structure. It is relatively hydrophobic, making it poorly soluble in water. It is found in milk as a suspension of particles called "casein micelles" which show only limited resemblance with surfactant-type micellae in a sense that the hydrophilic parts reside at the surface and they are spherical. However, in sharp contrast to surfactant micelles, the interior of a casein micelle is highly hydrated. The caseins in the micelles are held together by calcium ions and hydrophobic interactions. Several models account for the special conformation of casein in the micelles (Dalglish, 1998). One of them proposes the micellar nucleus is formed by several submicelles, the periphery consisting of microvellosities of  $\kappa$ -casein (Walstra, 1979; Lucey, 2002). Another model suggests the nucleus is formed by casein-interlinked fibrils (Holt, 1992). Finally, the most recent model (Horne, 1998) proposes a double link among the caseins for gelling to take place. All three models consider micelles as colloidal particles formed by casein aggregates wrapped up in soluble  $\kappa$ -casein molecules.

**Storage** Aliquot and store at -20°C or -80°C. Avoid repeated freeze/thaw cycles.

**Tested Applications** ELISA, WB, SDS-PAGE

**Form** Liquid

**Storage Buffer** PBS, pH 7.4

**Alias** N/A

**Product Type** Native Protein

**Sensitivity** Not test

**Purity**  $\geq 95\%$  (SDS-PAGE)

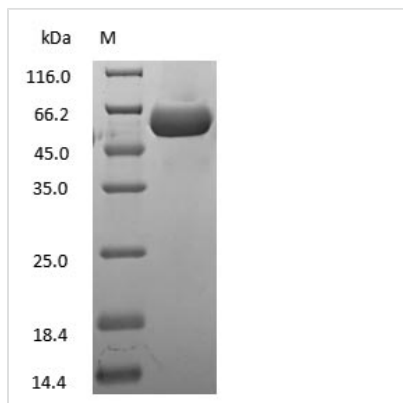
**Sequence** Full length protein

**Research Area** Cell Biology

**Source** Purified from Human milk

**Protein Names** Human Casein

**Image**



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.