

Product Specification Sheet

**Rabbit Anti-Bovine Casein Antibody**

<input type="checkbox"/> Cat. # CASN11-SB	Rabbit Anti-Bovine Casein IgG	<b>SIZE:</b> 100 ug
<input type="checkbox"/> Cat. # CASN15-N-10	Bovine Casein Protein for ELISA	<b>SIZE:</b> 10 mg

Casein is the name for a family of related phosphoproteins ( $\alpha$ S1,  $\alpha$ S2,  $\beta$ ,  $\kappa$ ). These proteins are commonly found in mammalian milk, making up 80% of the proteins in cow milk and between 20% and 45% of the proteins in human milk. Casein has a wide variety of uses, from being a major component of cheese, to use as a food additive, to a binder for safety matches. As a food source, casein supplies amino acids, carbohydrates, and the two inorganic elements calcium and phosphorus. There are four main types of Casein which make approximately 80% of the total protein in bovine milk:  $\alpha$ -s1 Casein,  $\alpha$ -s2 Casein,  $\beta$ -Casein, and  $\kappa$ -Casein. Casein is proposed to be the main protective constituent in milk. Cow's milk allergy (CMA) affects 2.5% of children less than 2 years of age, but about 80% become clinically tolerant within the first 3 years of life. Casein is one of the major allergens responsible for CMA and seems to play an important role in persistent allergy. The isoelectric point of casein is 4.6. Since milk's pH is 6.6, casein has a negative charge in milk. The purified protein is water insoluble. While it is also insoluble in neutral salt solutions, it is readily dispersible in dilute alkalis and in salt solutions such as sodium oxalate and sodium acetate.

The main causal allergens for CMA is caseins and proteins in lactoserum (beta-lactoglobulin, alpha-lactoalbumin), and the clinical manifestations are highly variable in terms of their presentation and severity. Most allergic reactions affect the skin, followed by the gastrointestinal and respiratory systems, and severe anaphylaxis may occur. The most efficient treatment for cow's milk allergy is an elimination diet and the use of adequate substitution formulas. This protein has numerous experimental applications including use as a blocking agent in immunochemistry, recovery of enzyme activity from SDS extracted samples, and as a substrate for protease and kinase assays.

**Source of Antigen and Antibodies**

<b>Antigen</b>	Cow milk casein
<b>Ab Host/type</b>	Rabbit polyclonal IgG supplied in PBS, pH 7.4, and 0.09% azide; Casein specific IgG conc. is ~ 1 mg/ml
2-ab	Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

**CASN15-N-10 Bovine Casein Protein for ELISA**

**Form & Storage of Antibodies/Peptide Control**

Casein protein is purified from bovine milk. It is supplied in water containing 0.1% azide at 10 mg/ml in either liquid or lyophilized powder. The stock solution should be frozen in suitable aliquots and frozen at -20oC for storage.

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Recommended Usage**

**ELISA:** Purified bovine casein (**CASN15-N-10**) can be used to coat ELISA plates and detected with purified casein antibodies (**CASN11-SB**) (1:500-1:1000 dilution).

**Western Blotting/IHC** purified casein antibodies (**CASN11-SB**) 1:100-1:500.

**Specificity & Cross-reactivity**

This antibody reacts with Bovine, Human, Mouse & Rabbit casein. Antibody cross-reactivity with other species not known.

**General References:** Martorell-Aragonés A et al Allergol Immunopathol (Madr) 2015; Dupont C et al Br J Nutr. 2015; Chatchatee et al 2001; Kunz, C; Lonnerdal, B (1990) Solinas, C et al. (Oct 2010) Walstra, Pieter (1979) Truswell, A.S. (2005) <http://en.wikipedia.org/wiki/Casein>;

\*This product is for In vitro research use only.

**Related material available from ADI**

Catalog# Prod Description

GLTN11-S SP-89076-5 3300-310-GLA	Anti-Wheat Gluten antiserum Gluten Exorphin C (AA: Tyr-Pro-Ile-Ser-Leu) Human Anti-Gliadin IgA ELISA kit, 96 tests,
GLDN11-S SP-88514-5 3300-305-GLM 3300-300-GLG	Anti-Wheat Gliadin antiserum Gliadin (43-49)(Gliadorphin) Alpha Human Anti-Gliadin IgM ELISA kit, 96 tests, Human Anti-Gliadin IgG ELISA kit, 96 tests,
GLDN15-N-1 SP-58780-1 SP-89924-1 OVA11-A OVA11-S	Wheat Gliadin $\alpha$ -Gliadin (57-73)] $\alpha$ -Gliadin (57-89) Anti-chicken Egg Ovalbumin (OVA) IgG Anti-chicken Egg Ovalbumin IgG
OVA12-R	Chicken Egg Ovalbumin purified protein
OVA13-M ascites (IgG1)	Monoclonal Anti-chicken Egg Ovalbumin
OVA14-S	Mouse polyclonal Anti-chicken Egg Ovalbumin Antiserum (IgA+G+M+E)
OVA15-N- (ELISA, antigen, allergy grade)	1000 Chicken egg ovalbumin protein

CASN11-SB-Anti-Bovine-Casein-IgG

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