



Ricin communis, B chain (RCA II, Castor bean)

Catalog number

R2031-52J

Supplier

United States Biological

The ricin toxin consists of two chains, A and B, covalently linked by a disulfide bond. The A chain acts as a glycosidase that removes an adenine residue from the 28S rRNA. The area from which the adenine is removed is essential for binding of elongation factors, destroying it leaves the ribosome inactive and unable to support protein synthesis. The A chain can inactivate a few thousand ribosomes per minute, much faster than the cell can replace them, meaning that a single ricin A chain can kill a cell. The B chain binds to complex carbohydrates on the cell surface to facilitate entry of the A chain into the cell. Without the B chain, the A chain has very low toxicity. Ricin is easily extracted from the castor bean (*Ricinus communis*), and the lethal dose for humans is very small. It is toxic when inhaled, ingested or injected and there is no known antidote, although a vaccine has been developed. Treatment is symptomatic and supportive, with long term organ damage likely in survivors. The ease of extraction and distribution makes it a potential candidate for biological warfare although it is less stable than other agents, such as anthrax.

Applications

Suitable for use in ELISA and Western Blot. Other applications have not been tested.

Recommended Dilutions

Optimal dilution to be determined by researcher.

Storage and Stability

May be stored at 4°C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20°C. Aliquots are stable for 12 months after receipt. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.

Immunogen

Natural full-length Ricin communis, B chain.

Formulation

Supplied as a liquid in PBS, pH 7.4, 0.09% sodium azide.

Purity

Purified by Protein G affinity chromatography from tissue culture supernatant.

Specificity

Recognizes the B chain of the ricin toxin (RCA60), a 60kD glycoprotein. Does not crossreact with the agglutinin RCA120.

Product Type

Mab

Isotype



IgG1

Grade

Affinity Purified

Applications

E WB

Storage

-20°C