

DATASHEET

Tropomyosin/Troponin

From skeletal muscle (rabbit)
(> 95% purity)

Quantity: 100µg
Cat. #: 8321-01

For Use in Research Only.
Not for Use in Diagnostic Processes.

Product Description

Tropomyosin/Troponin is a protein complex of the thin filament, regulating the actin-myosin interaction in a Ca⁺⁺-dependent manner. Tropomyosin (~70kD) is a heterodimeric protein (α,β) consisting of alpha helical coiled coils, laterally binding to actin filaments. The troponin complex consists of three proteins (TnI, TnC, TnT) and binds in a 1:1 molar ratio to each tropomyosin dimer, resulting in a complex of ~150kD. The protein concentration was determined by the Biuret method. Tropomyosin/Troponin (100µg) is supplied as lyophilized powder containing 0.1M KCl, 20mM imidazole pH 7.4, 1mM EDTA, 2mM DTT and 2% disaccharides, when reconstituted with 100µl H₂O.

Due to our special cryoconservation technique the protein is of high biological activity as routinely determined by high speed cosedimentation assay (100,000xg, 30min) with rabbit skeletal muscle α -actin in the presence of sugars. At a molar ratio of 1:7 (actin:Tm/Tn), the proteins are mixed with F-actin, and after 20min at RT, the samples are used for high speed centrifugation.

Product Handling

Preparation of a working stock

Add 100µl of ultrapure water to each tube obtain a working stock of 1mg/ml. Leave to rehydrate for 2min at room temperature. Vortex mildly until dissolved. For less critical assays the working stock may now simply be pre-spun (15.000xg, 10min) and is now ready-to-use. To exclude interference with actin binding sites or with other ligands by sugars added for from cryoconservation, the buffer may be exchanged against PolyMix (Cat no.: 5000-0*) or any other suitable buffer (see buffer composition above). Buffer exchange is also recommended in cases where no binding is observed.

Product Storage and Stability

The highest product performance is achieved when stored at -70° upon arrival, where it will be stable for at least 6 months. Once dissolved, the protein is kept on ice and will be stable for at least two weeks.

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