

DATASHEET

Caldesmon

From smooth muscle (chicken gizzard)
(~98% purity)

Quantity: 2x50µg
Cat. #: 8318-01

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

Product Description

Caldesmon from gizzard smooth muscle is the high molecular weight isoform (793 aa, 87-89 kDa, h-CaD), constituting a component of the thin filaments of the contractile apparatus. Caldesmon is a multifunctional protein with binding sites for actin, myosin, tropomyosin and calcium binding proteins, e.g. calmodulin. It is phosphorylated by a number of kinases. In smooth muscle caldesmon is a modulator of the actin filament activation of the myosin ATPase, motility and contractility.

h-CaD consists of four similar sized four domains. The binding sites for actin, calmodulin and the main tropomyosin binding sites are located in domain 4, containing the C-terminal 150 amino-acids.

The protein concentration was determined UV-VIS $A_{280}=0.1201$ equals 1.0mg/ml. Smooth muscle caldesmon (50µg) is supplied as lyophilized powder containing 0.1M KCl, 10mM imidazole pH 7.4, 2mM MgCl₂, 0.2mM DTT and 3% disaccharides, when reconstituted with 50µl H₂O.

Product Handling

1. Preparation of a working stock

Add 50µl ultrapure water to the tube with 50µg caldesmon and vortex until dissolved to obtain a working stock of 1mg/ml. Leave to rehydrate for 2min at room temperature. The protein stock is now ready-to-use. It is recommendable to exchange buffer by dialysis to remove the sugars from freeze-drying. Subsequent centrifugation at 100,000xg for 30min removes possible aggregates. For less critical assays the caldesmon stock may be pre-spun (15.000xg, 10min) or filtered (0.2µm).

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, caldesmon is kept on ice and should be used within one week.

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