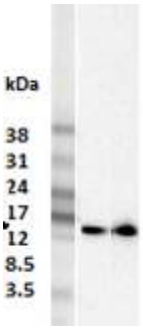
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Caveolin-1, Rat, clone 7C8		
Catalog number	HM3014-20UG		
Lot number	-	**Expiry date**	-
Volume	200 µl	**Amount**	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Mouse IgG1	**Conjugate**	None
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #			1				1	1,2,3
Yes			●				●	●
No								
N.D.	●	●		●	●	●		

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



W: Western blot with HM3014. Lane 2 and 3 show both non-reduced and reduced sample treatment. Sample used was recombinant Caveolin-1, 125 ng and HM3014 was used in a concentration of 2 µg/ml.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- W: Non-reduced or Reduced sample treatment and SDS-PAGE was used. The band sizes are ~22 kDa (Caveolin-1β) and ~25 kDa (caveolin-1α) (Ref.1).
- Positive control: Adipocytes (3T3-L1 adipocytes); Negative control: Cytoplasmic extracts of adipocytes.

General Information

Description

The monoclonal antibody 7C8 recognizes rat caveolin-1, a membrane protein of ~22 kDa. Caveolae are sphingomyelin/cholesterol-rich membrane domains first discovered as membrane invaginations on the surface of endothelial and epithelial cells. Caveolae are present in most cells, but are especially abundant in adipocytes. In addition to caveolins only two major protein components of caveolae were identified, namely the semicarbazide sensitive amine oxidase (SSAO) and the scavenger receptor CD36. Caveolin cycles between the plasma membrane and intracellular compartments via the endocytotic pathway. Caveolin is involved in the rapid intracellular transport of newly synthesized cholesterol from the ER directly to the caveolae. Caveolin plays an important role in multiple signaling pathways, molecular transport and cellular proliferation and differentiation. Caveolin binds to endothelial nitric oxide synthase leading to enzyme inhibition. Furthermore caveolin is a candidate tumor suppressor gene in many tumors. The specific functions of caveolin-1/caveolae are highly cell and context dependent. The monoclonal antibody 7C8 recognizes caveolin-1α as well as caveolin-1β, which are present in many tissues, like aorta, heart, muscle, lung, adipose white, brown and epididymal fat. The monoclonal antibody 7C8 can be used to immuno-isolate caveolae.

Gene	Gene name: Cav1, Cav
Cross reactivity	Mouse: Yes (Ref.3).
References	1. Souto, R et al; Immunopurification and characterization of rat adipocyte caveolae suggest their dissociation from insulin signaling. J Biol Chem 2003, *278*: 18321 2. Liu, L et al; A Critical Role of Cavin (Polymerase I and Transcript Release Factor) in Caveolae Formation and Organization. J Biol Chem 2007, *283*:4314 3. Liu, L et al; Cavin-3 Knockout Mice Show that Cavin-3 Is Not Essential for Caveolae Formation, for Maintenance of Body Composition, or for Glucose Tolerance. PLoSONE 2014, *9*: e102935
Storage&stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.
Precautions	For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC	Date
Brenda Teunissen	29/10/2021

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.