

# Proteasome 20S $\alpha$ 7 subunit monoclonal antibody (MCP72)

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Citations: 26

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## Ordering Information

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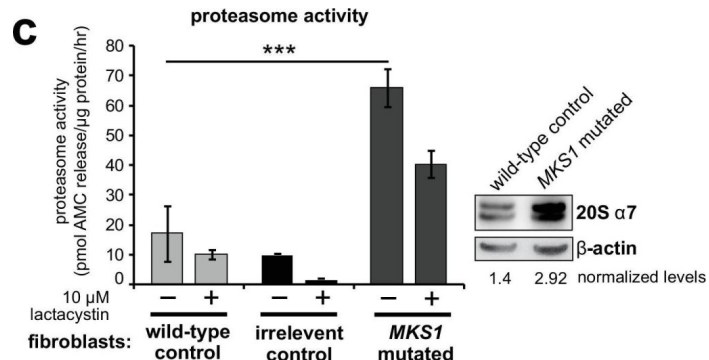
BML-PW8110-0025	25 $\mu$ l
BML-PW8110-0100	100 $\mu$ l

Manuals, SDS & CofA

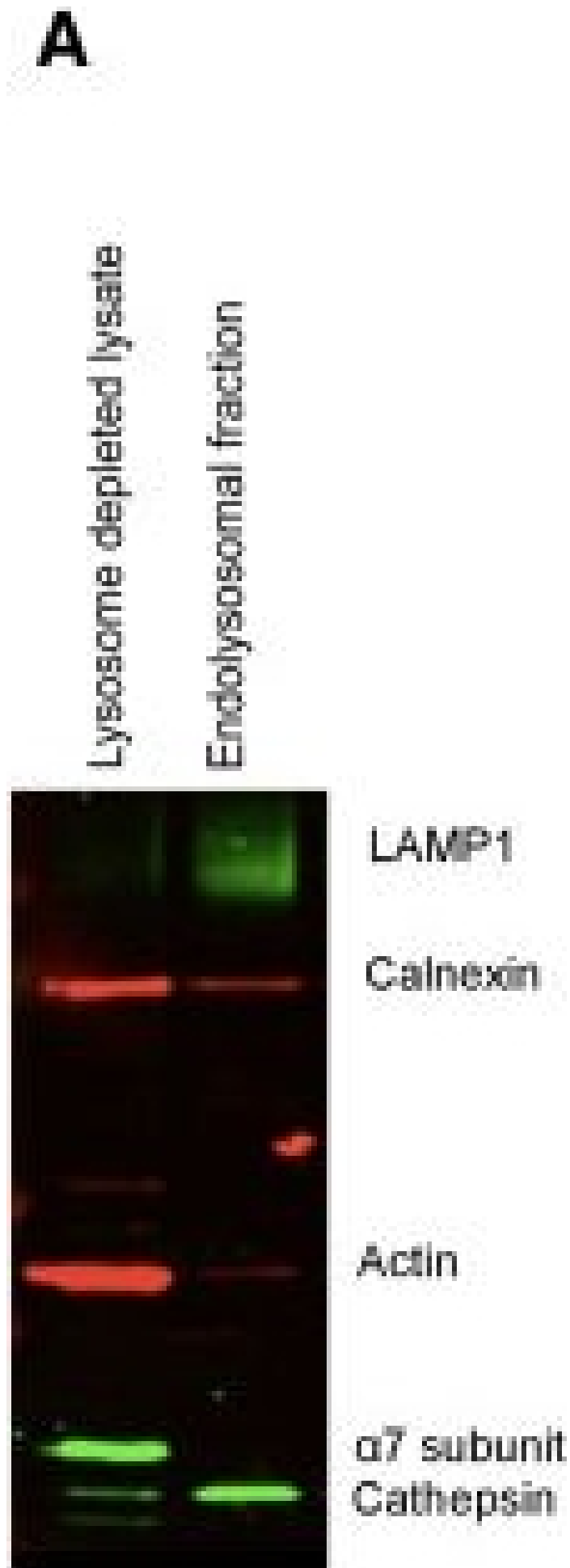
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Deregulation of canonical Wnt signalling and proteasome activity following loss or mutation of MKS1. (a) Immunoblots for total soluble  $\beta$ -catenin, phospho- $\beta$ -catenin, cyclin D1 and  $\beta$ -actin (loading control) in either wild-type normal or MKS1-mutated immortalised human fibroblasts from an MKS patient (MKS-562) following treatment with MG-132 proteasome inhibitor (+) or vehicle control (-). (b) SUPER-TOPFlash assays of canonical Wnt signalling activity in human MKS1-mutated fibroblasts compared to wild-type control fibroblasts following treatment with control conditioned medium, Wnt5a, Wnt3a, or a mixture of Wnt3a and Wnt5a media, as indicated. Statistical significance of pairwise comparisons is shown (\* indicates  $p < 0.05$ , paired two-tailed Student t-test). Error bars indicate s.e.m. with results shown for four independent biological replicates. (c) Proteasome activity assays for wild-type or MKS1-mutated human fibroblasts or an irrelevant control (ASPM-mutant fibroblasts), following treatment with c-lactacystin- $\beta$ -lactone (+) or vehicle control (-). Statistical significance of pairwise comparison as for (b); \*\*\* indicates  $p < 0.001$  for three independent biological replicates. Immunoblots show levels of the 20 S proteasome  $\alpha 7$  subunit compared to  $\beta$ -actin loading control. (d) Protease activity assays of crude proteasome preparations from Mks1+/+ or Mks1-/- mouse embryonic fibroblasts (MEFs), expressed as pmol AMC released per  $\mu$ g proteasome per hr. Treatment with lactacystin is the assay control. Statistical analysis as for (b); \*\* indicates  $p < 0.01$ . (e) PCR products in MKS1 patient corresponds to skipping of exon 5 and exon 16, confirmed by Sanger sequencing, due to the frameshift mutation affecting splicing. (f) Immunoblot showing loss of MKS1 protein in MKS1-mutated patient fibroblasts compared to healthy controls; loading control is  $\beta$ -actin. (g) IF microscopy images of wild-type control and MKS1-mutated fibroblasts showing loss of cilia and disorganisation of cytoskeleton in patient cells. Bar graphs quantify reductions in incidence and length of cilia in patient



Differential centrifugation of PBMC lysate yields fractions that are highly enriched in endolysosomes. (A) Enrichment of endolysosomes in fractions recovered after differential centrifugation was assessed by western blot. PBMC lysate from which endolysosomes were extracted (lane 1), fraction enriched in endolysosomal



## Handling & Storage

Handling	Avoid freeze/thaw cycles. After opening, prepare aliquots and store at -20°C.
Long Term Storage	-20°C
Shipping	Blue Ice

## Regulatory Status

RUO - Research Use Only

## Product Details

Alternative Name	Proteasome subunit $\alpha$ type-3, Macropain subunit C8
Application	IHC, WB
Clone	MCP72
Formulation	Liquid. In PBS containing 10mM sodium azide.
Gene/Protein Identifier	PSMA3 (gene name)
Host	Mouse
Immunogen	Dinitrophenylated human placenta derived proteasomes.
Isotype	IgG1
Purity Detail	Partially purified ascites.
Source	Purified from hybridoma tissue culture supernatant.
Species Reactivity	Arthropod, Human, Rabbit, Rat, Yeast
Specificity	Recognizes the $\alpha 7$ subunit of the 20S proteasome.
Technical Info / Product Notes	Various systems for the nomenclature of the proteasome subunits have been established. This may be a source of confusion as the system on UniProt differs from “standard” nomenclature as described in the literature. The UniProt ID and Gene Name will help to clearly identify the proteins.
UniProt ID	P25788

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