For Research Use Only

MBL
A JSR Life Sciences Company

p62 and phospho-p62 ELISA Kit

CycLex® Total p62 ELISA Kit
CycLex® Phospho-p62 Ser349 ELISA Kit
CycLex® Phospho-p62 Ser403 ELISA Kit

The market's first ELISA kit for phosphorylated p62!

Features

- Comes with lysis buffer. Easy to prepare cell lysate!
- Useful for drug screening!
- Human and mouse cell lysate can be used.

What is Selective autophagy?

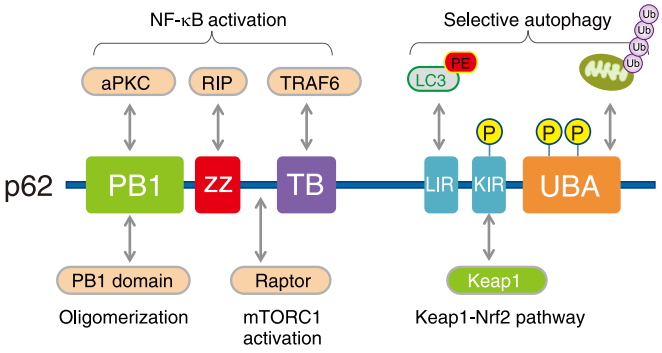
Autophagy was initially thought to be a non-selective degradation mechanism, because the entire vesicle contents were digested. However, recent findings have revealed the selective degradation of mitochondria and other specific organelles, bacteria, and aggregates of proteins with attached ubiquitin chains (polyubiquitinated proteins). This mechanism is called "selective autophagy."

p62/SQSTM1

"Adaptor proteins" are necessary to link autophagosomes to proteins destined for selective degradation. One of these adaptor proteins is p62/SQSTM1. p62 is a scaffolding protein that interacts with various signaling molecules. p62 contains an LC3-interacting region and is believed to be a substrate for selective autophagy. In addition, p62 contains a domain that binds ubiquitin chains, and mediates the recruitment of poly ubiquitinated protein aggregates and depolarized mitochondria to the autophagic machinery.

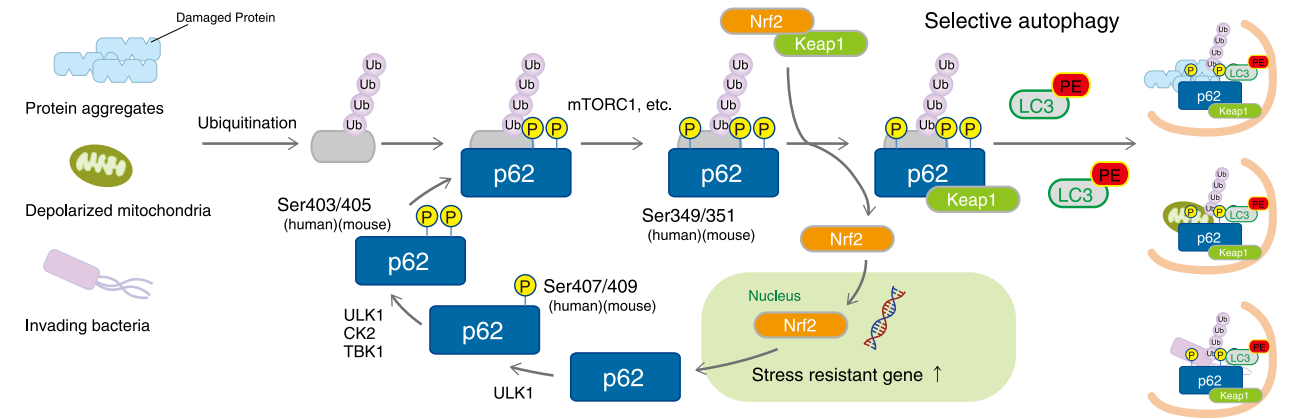
There is increasing interest about impairment of autophagic degradation in neurodegenerative diseases (such as Alzheimer's disease, Parkinson's disease, and amyotrophic lateral sclerosis), alcoholic hepatitis, hepatic steatosis, and liver cancer.

■ Domain structure of p62/SQSTM1



This illustration was made with the supervision of Dr. Masaaki Komatsu and Dr. Yoshinobu Ichimura (Niigata University).

■ p62-Keap1-Nrf2 pathway



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Phospho-p62

p62 has several phosphorylation sites. Two biophylaxis systems described below are effectively activated by the continuous phosphorylation on these sites.

● Selective autophagy

Removing misfolded or aggregated proteins and eliminating intracellular pathogens.

Phosphorylation of p62 at Ser407 (Human) /Ser409 (Mouse)
Phosphorylation of p62 at Ser403 (Human) /Ser405 (Mouse)

Increases the affinity of p62 for poly ubiquitin chains.

↓

● Nuclear translocation of Nrf2

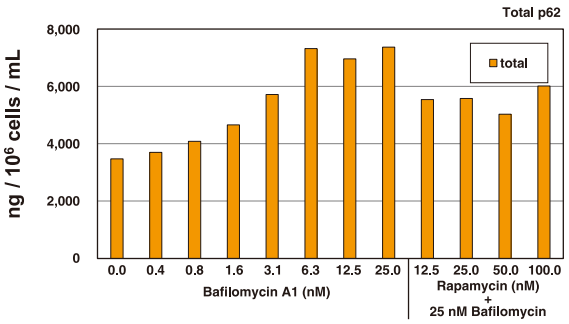
Exacerbate the expression of stress tolerance gene.

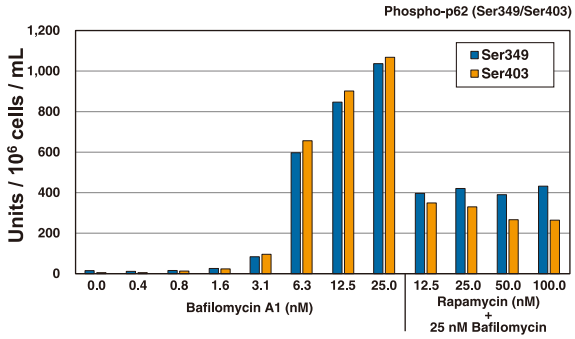
Phosphorylation of p62 at Ser349 (Human) /Ser351 (Mouse)

Increases the affinity of p62 for Keap1.

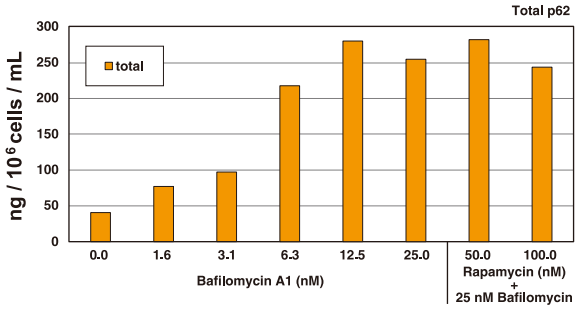
■ Example data of HeLa and MEF cells.

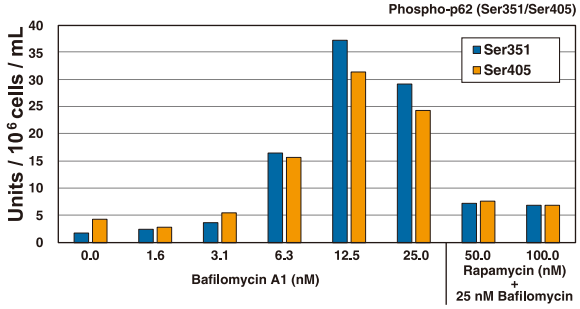
HeLa cells





MEF cells





Related product list

<Kits>

Code No.	Product	Size
NEW! CY-7055	CycLex® Total p62 ELISA Kit	96 Assay
NEW! CY-7056	CycLex® Phospho-p62 Ser349 ELISA Kit	96 Assay
NEW! CY-7057	CycLex® Phospho-p62 Ser403 ELISA Kit	96 Assay

<Antibodies>

Code No.	Product	Clone	Isotype	Size	Application	Reactivity
PM045	Anti-p62 (SQSTM1) pAb	Polyclonal	Rabbit Ig (aff.)	100 µL	WB / IP / IC / IH	Hu / Mo / Rat / Ham
PM066	Anti-p62 C-terminal pAb	Polyclonal	Guinea pig Ig (aff.)	100 µL	WB / IP / IC / IH	Hu / Mo / Rat / Ham
PM066-7	Anti-p62 C-terminal pAb-HRP-DirecT	Polyclonal	Guinea pig Ig (aff.)	50 µL	WB	Hu / Mo / Rat / Ham
M162-3	Anti-p62 (SQSTM1) (Human) mAb	5F2	Mouse IgG1 κ	100 µg/100 µL	WB / IP / FCM / IC / IH	Hu
M162-A48	Anti-p62 (SQSTM1) (Human) mAb-Alexa Fluor®488	5F2	Mouse IgG1 κ	100 µg/100 µL	FCM / IC	Hu
M162-A59	Anti-p62 (SQSTM1) (Human) mAb-Alexa Fluor®594	5F2	Mouse IgG1 κ	100 µg/100 µL	FCM / IC	Hu
M162-A64	Anti-p62 (SQSTM1) (Human) mAb-Alexa Fluor®647	5F2	Mouse IgG1 κ	100 µg/100 µL	FCM / IC	Hu
PM074	Anti-Phospho-p62 (SQSTM1) (Ser351) pAb	Polyclonal	Rabbit Ig (aff.)	100 µL	WB / IP / IC / IH	Hu / Mo
M217-3	Anti-Phospho-p62 (SQSTM1) (Ser351) mAb	5D5	Mouse IgG1 κ	100 µg/100 µL	WB / IC / IH	Hu / Mo
D343-3	Anti-Phospho-p62 (SQSTM1) (Ser403) mAb	4F6	Rat IgG2a κ	100 µg/100 µL	WB / IH	Hu / Mo
D344-3	Anti-Phospho-p62 (SQSTM1) (Ser403) mAb	4C8	Rat IgG2a κ	100 µg/100 µL	WB / IH	Hu / Mo
PM069	Anti-NRF2 pAb	Polyclonal	Rabbit Ig (aff.)	100 µL	WB / IP / IC / IH	Hu / Mo(w) / Rat(w) / Ham(w)
M200-3	Anti-NRF2 mAb	1F2	Mouse IgG1 κ	100 µg/100 µL	WB / IP / IC / IH	Hu / Mo / Rat / Ham
M224-3	Anti-KEAP1 mAb	KP1	Mouse IgG2a κ	100 µg/100 µL	WB	Hu / Mo / Rat / Ham
MK-11-3	Anti-Ubiquitin mAb	1B3	Mouse IgG1	100 µg/100 µL	WB / IC* / IH* / Other*	Hu / Mo* / Bov*
MK-12-3	Anti-Ubiquitin mAb	2C5	Mouse IgG1	100 µg/100 µL	WB / IP* / IC*	Hu / Mo / Rat / Bov
D058-3	Anti-Multi Ubiquitin mAb	FK2	Mouse IgG1 κ	100 µg/100 µL	WB / IC* / ELISA*	Hu / Mo* / Mky* / Yeast*

＊Application : WB: Western Blotting, IP : Immunoprecipitation, IH : Immunohistochemistry, IC : Immunocytochemistry, FCM : Flow Cytometry
Reactivity : Hu: Human, Mo : Mouse, Ham : Hamster, Bov : Bovine, Mky : Monkey, (w) : (weak)
(aff.) : affinity purified * : The use is reported in a research article (Not tested by MBL). Please check the data sheet for detailed information.

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Produced by

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