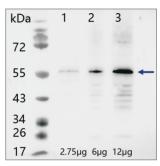




### Molecular Chaperone Related Antibodies

Chaperonins belong to a large class of molecules that assist protein folding, which can be divided into two groups, Group I and Group II. In chloroplasts, Cpn60 complex belongs Group I chaperonin and contains Cpn60 $\alpha$  and Cpn60 $\beta$  as well as Cpn20 proteins.



WB CPN60B1/2 / PHY0372S

Product Number	Abbreviation	Reference Sequence code	Size
PHY0370S	CPN60A1 Antibody	AT2G28000.1	150ug
PHY0371S	CPN60A2 Antibody	AT5G18820.1	150ug
PHY0372S	CPN60B1/2 Antibody	AT1G55490.1/ AT3G13470	150ug
PHY0373S	CPN60B3 Antibody	AT5G56500.1	150ug
PHY0374S	CPN60B4 Antibody	AT1G26230.1	150ug
PHY0375S	CPN10-I Antibody	AT1G14980.1	150ug
PHY0376S	CPN10-II Antibody	AT1G23100.1	150ug
PHY0377S	CPN10-I Antibody	AT3G60210.1	150ug
PHY0378S	CPN20 Antibody	AT5G20720.1	150ug







## Chloroplast Gene Transcription System



In chloroplasts, gene transcription system includes NEP and PEP complex. PEP complex is composed of rpoA, rpoB, RpoC and other regulation factors like pTAC proteins.

Product Number	Abbreviation	Reference Sequence code	Size
PHY0379S	RpoA Antibody	ATCG00740.1	150ug
PHY0691S	RpoB Antibody	ATCG00190.1	150ug
PHY0381S	RpoC1 Antibody	ATCG00180.1	150ug
PHY0382S	RpoC2 Antibody	ATCG00170.1	150ug
PHY0383S	pTAC6 Antibody	AT1G21600.1	150ug
PHY0654S	VIPP1 Antibody	AT1G65260.1	150ug
PHY0385S	pTAC2 Antibody	AT1G74850.1	150ug
PHY0386S	pTAC17 Antibody	AT1G80480.1	150ug
PHY0387S	pTAC11 Antibody	AT2G02740.1	150ug
PHY0388S	pTAC18 Antibody	AT2G32180.1	150ug
PHY0389S	pTAC12 Antibody	AT2G34640.1	150ug
PHY0390S	pTAC8 Antibody	AT2G46820.1	150ug
PHY0391S	pTAC3 Antibody	AT3G04260.1	150ug
PHY0392S	pTAC13 Antibody	AT3G09210.1	150ug
PHY0393S	pTAC16 Antibody	AT3G46780.1	150ug
PHY0394S	pTAC10 Antibody	AT3G48500.1	150ug
PHY0395S	pTAC5 Antibody	AT4G13670.1	150ug
PHY0396S	pTAC9 Antibody	AT4G20010.1	150ug
PHY0397S	pTAC14 Antibody	AT4G20130	150ug
PHY0398S	pTAC7 Antibody	AT5G24314	150ug
PHY0399S	pTAC15 Antibody	AT5G54180.1	150ug



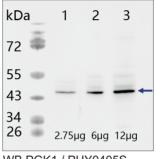




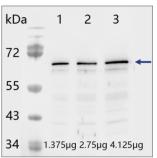


#### Calvin Cycle **Related Antibodies**

The Calvin cycle takes place in the stroma of chloroplasts and uses the energy stored by the light-dependent reactions to form glucose and other carbohydrate molecules using a series of enzymes.







WB TKL-1 / PHY0407S

Product Number	Abbreviation	Reference Sequence code	Size
PHY0400S	RCA Antibody	AT2G39730.1	150ug
PHY0401S	RMT Antibody	AT1G14030.1	150ug
PHY0402S	RPI3 Antibody	AT3G04790.1	150ug
PHY0403S	FBP Antibody	AT3G54050.1	150ug
PHY0404S	RPE Antibody	AT5G61410.1	150ug
PHY0405S	PGK1 Antibody	AT3G12780.1	150ug
PHY0406S	FBA1 / 2 Antibody	AT4G38970.1/AT2G21330.1	150ug
PHY0407S	TKL-1 Antibody	AT3G60750.1	150ug
PHY0408S	GAPA1 Antibody	AT3G26650.1	150ug
PHY0409S	TPI Antibody	AT2G21170.1	150ug
PHY0410S	SBPase Antibody	AT3G55800.1	150ug







## Chloroplast Ribosomal Complex Antibodies

Chloroplast Ribosomal complex is used for synthesis chloroplast protein and is composed of dozens of subunits.

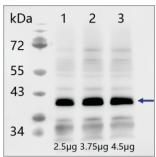
Product Number	Abbreviation	Reference Sequence code	Size
PHY0411S	RP-L6p Antibody	AT1G05190.1	150ug
PHY0413S	RP- L11p Antibody	AT1G32990.1	150ug
PHY0414S	RP- L18p Antibody	AT1G48350.1	150ug
PHY0415S	RP- S17 Antibody	AT1G79850.1	150ug
PHY0417S	RP- L3 Antibody	AT2G43030.1	150ug
PHY0418S	RP- L12-C Antibody	AT3G27850.1	150ug
PHY0419S	RP- L9 Antibody	AT3G44890.1	150ug
PHY0420S	PSRP2 Antibody	AT3G52150.2	150ug
PHY0421S	RP- L1p Antibody	AT3G63490.1	150ug
PHY0422S	PSRP-7 Antibody	AT4G29060.1	150ug
PHY0423S	RP- L10 Antibody	AT5G13510.1	150ug
PHY0424S	RP- S1 Antibody	AT5G30510.1	150ug
PHY0425S	RP- L27 Antibody	AT5G40950.1	150ug
PHY0426S	RP- L24 Antibody	AT5G54600.1	150ug
PHY0427S	RP- S2 Antibody	ATCG00160.1	150ug
PHY0428S	RP- S4 Antibody	ATCG00380.1	150ug
PHY0430S	RP- L14 Antibody	ATCG00780.1	150ug
PHY0431S	RP- L16 Antibody	ATCG00790.1	150ug
PHY0432S	RP- L23.1/L23.2 Antibody	ATCG00840.1/ATCG01300.1	150ug
PHY0434S	RP- S12 Antibody	ATCG00065.1/ATCG01230.1/ ATCG00905.1	150ug





# Other Chloroplast Protein Antibodies

Other chloroplast proteins: Chloroplast contains more than 3000 proteins and most of the protein are encoded by nuclear genome. These proteins play important role in complex biogenesis, gene experssion as well as other functions.



WB TAP38 / PHY0435S

Product Number	Abbreviation	Reference Sequence code	Size
PHY0435S	TAP38 Antibody	AT4G27800.1	150ug
PHY0436S	ALB3 Antibody	AT2G28800	150ug
PHY0437S	SRP54 Antibody	AT5G03940.1	150ug
PHY0438S	SRP43 Antibody	AT2G47450.1	150ug
PHY0439S	ALB4 Antibody	AT1G24490.1	150ug
PHY0440S	YCF3 Antibody	ATCG00360.1	150ug
PHY0441S	YCF4 Antibody	ATCG00520.1	150ug
PHY0442S	CPFTSY Antibody	AT2G45770.1	150ug
PHY0443S	YCF37 Antibody	AT1G22700.1	150ug
PHY0444S	PTOX Antibody	AT4G22260.1	150ug
PHY0445S	FD3 Antibody	AT2G27510.1	150ug
PHY0446S	FD4 Antibody	AT5G10000.1	150ug
PHY0447S	FdC1 Antibody	AT4G14890.1	150ug
PHY0448S	FdC2 Antibody	AT1G32550.1	150ug







# Chloroplast TIC/TOC Related Antibodies



#### TIC/TOC proteins:

The TIC and TOC complexes are translocons located in the envelope of plants chloroplast and the protein complexes is used to facilitate the transfer of proteins into chloroplasts.

Product Number	Abbreviation	Reference Sequence code	Size
PHY0449S	TIC110 Antibody	AT1G06950.1	150ug
PHY0451S	TIC20-I Antibody	AT1G04940.1	150ug
PHY0452S	TIC20-II Antibody	AT2G47840.1	150ug
PHY0453S	TIC20-IV Antibody	AT4G03320.1	150ug
PHY0454S	TIC20-V Antibody	AT5G55710.1	150ug
PHY0455S	TIC62 Antibody	AT3G18890.1	150ug
PHY0456S	PTC52 Antibody	AT4G25650.2	150ug
PHY0457S	TIC55 Antibody	AT2G24820.1	150ug
PHY0458S	TIC32 Antibody	AT4G23430.2	150ug
PHY0459S	TIC22-III Antibody	AT3G23710.1	150ug
PHY0460S	TIC22-IV Antibody	AT4G33350.1	150ug
PHY0461S	TIC40 Antibody	AT5G16620.1	150ug
PHY0462S	TOC64-I Antibody	AT1G08980.1	150ug
PHY0463S	TOC64-III Antibody	AT3G17970.1	150ug
PHY0464S	ATJ8 Antibody	AT1G80920.1	150ug
PHY0465S	TOC132 Antibody	AT2G16640.1	150ug
PHY0466S	TOC120 Antibody	AT3G16620.1	150ug
PHY0467S	TOC159 Antibody	AT4G02510.1	150ug
PHY0468S	TOC75-4 Antibody	AT4G09080.1	150ug
PHY0469S	OM64 Antibody	AT5G09420.1	150ug

