Background α-Amylases are hydrolytic enzymes responsible for the mobilization of the starch into metabolizable sugars. This process provides the energy for the growth of roots and shoots and is crucial during germination of cereal seeds. These enzymes are coded by a multigene family and even thought other amylolytic enzyme participate in the process of starch breakdown, the contribution of α-amylase is the prerequisite for the initiation of this process.

Immunogen KLH-conjugated synthetic peptide derived from known Oryza sativa P17654

Host Rabbit

Clonality Polyclonal

Purity Serum

Format Lyophilized

Quantity 100 µl

Reconstitution For reconstitution add 100 µl of sterile water.

Storage Store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles. Please, remember to spin tubes briefly prior to opening them to avoid any losses that might occur from lyophilized material adhering to the cap or sides of the tubes.

Tested applications Western blot (WB)

Related products AS10 716 | Ramy 3D | Alpha-amylase isozyme 3D

Plant protein extraction buffer

Secondary antibodies

Additional information Antibody will detect all alpha amylase isoforms from rice, barley and other cereals

Application information

Recommended dilution 1 : 5000 (WB)

Expected | apparent MW 43-48 kDa (depending upon the isoform)

Confirmed reactivity Oryza sativa, Panicum virgatum

Predicted reactivity Cereals, Kalanchoe laxiflora

Not reactive in Pinus strobus


application examples

25 µg of total protein from Oryza sativa seedlings (from 1 day to 5 days of imbibition on filter paper at 28°C) extracted with an SDS Extraction Buffer (60mM Tris-HCl pH 8.0, 2% SDS, 1,5% Sucrose) were separated on XT CRITERION 10%Bis-Tris (BioRad) SDS-PAGE and blotted 1h to PVDF. Blot was blocked immediately in milk in TBS-T for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody
at a dilution of 1:5,000 in milk in TBS-T for 3h at RT with agitation. The antibody solution was decanted and the blot was rinsed briefly once, then washed once for 15 min and 3 times for 5 min in TBS-T at RT with agitation. Blot was incubated in secondary antibody (goat anti-rabbit IgG HRP conjugated, AS09 602) diluted 1:20 000 in milk in TBS-T for 50 min at RT and then washed as above and developed for 3 min with standard ECL. Images of the blot were obtained using BioSpectrum AC Imaging System (UVP). Exposure time was 30 min. The arrow indicates alpha-amylase (between 47kDa and 50KDa as expected).

Courtesy Valeria Banti and prof. Pierodomenico Perata, PlantLab, Scuola Superiore Sant'Anna