

Recombinant human SMURF 2 protein ab95930

2 Images

Description

Product name	Recombinant human SMURF 2 protein
Biological activity	Specific Activity: 0.00049 pmol/min/μg Assay conditions: 50 μl reaction mix (4 mM ATP, 5mM MgCl ₂ , 1mM DTT, E1 (0.5 μg), E2 (2.8 μg), Biotin-Ubiquitin (0.5 μg) and SMURF 2 (0-2 μg) in 50mM Tris pH 7.4) incubate for 30min at 37°C, then add to streptavidin coated plates and incubate for 30min at 37°C. Add antibody against SMURF 2, incubate 1h. Finally, incubate 1h with the Europeum-labeled secondary antibody. Time resolved fluorescence measured at room temperature (Lambda exc=330 nm, Lambda em=620 nm). Specific Activity: 0.00049 pmol/min/μg Assay conditions: 50 μl reaction mix (4 mM ATP, 5mM MgCl ₂ , 1mM DTT, E1 (0.5 μg), E2 (2.8 μg), Biotin-Ubiquitin (0.5 μg) and SMURF 2 (0-2 μg) in 50mM Tris pH 7.4) incubate for 30min at 37°C, then add to streptavidin coated plates and incubate for 30min at 37°C. Add antibody against SMURF 2, incubate 1h. Finally, incubate 1h with the Europeum-labeled secondary antibody. Time resolved fluorescence measured at room temperature (Lambda exc=330 nm, Lambda em=620 nm).
Purity	> 80 % SDS-PAGE. Affinity purified.
Expression system	Baculovirus infected insect cells
Accession	<u>Q9HAU4</u>
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Predicted molecular weight	72 kDa including tags
Amino acids	130 to 748
Tags	DDDDK tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab95930** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Functional Studies
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Form Liquid

Preparation and Storage

Stability and Storage Shipped on Dry Ice. Store at -80°C.
pH: 8.00
Constituents: 0.0462% (R*,R*)-1,4-Dimercaptobutan-2,3-diol, 0.395% Tris HCl, 0.05% Tween, 20% Glycerol (glycerin, glycerine), 0.58% Sodium chloride

102 µg/ml FLAG peptide

This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates. Interacts with SMAD1 and SMAD7 in order to trigger their ubiquitination and proteasome-dependent degradation. In addition, interaction with SMAD7 activates autocatalytic degradation, which is prevented by interaction with SCYE1. Forms a stable complex with the TGF-beta receptor-mediated phosphorylated SMAD2 and SMAD3. In this way, SMAD2 may recruit substrates, such as SNON, for ubiquitin-mediated degradation. Enhances the inhibitory activity of SMAD7 and reduces the transcriptional activity of SMAD2. Coexpression of SMURF2 with SMAD1 results in considerable decrease in steady-state level of SMAD1 protein and a smaller decrease of SMAD2 level.

Tissue specificity Widely expressed.

Pathway Protein modification; protein ubiquitination.

Sequence similarities Contains 1 C2 domain.
Contains 1 HECT (E6AP-type E3 ubiquitin-protein ligase) domain.
Contains 3 WW domains.

Domain The second and third WW domains are responsible for interaction with the PY-motif of R-SMAD (SMAD1, SMAD2 and SMAD3).
The C2 domain is involved in autoinhibition of the catalytic activity by interacting with the HECT domain.

Post-translational modifications Auto-ubiquitinated and ubiquitinated in the presence of RNF11 and UBE2D1.

Cellular localization Nucleus. Cytoplasm. Cell membrane. Membrane raft. Cytoplasmic in the presence of SMAD7. Co-localizes with CAV1, SMAD7 and TGF-beta receptor in membrane rafts.

Images

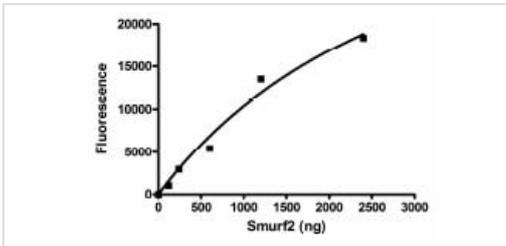
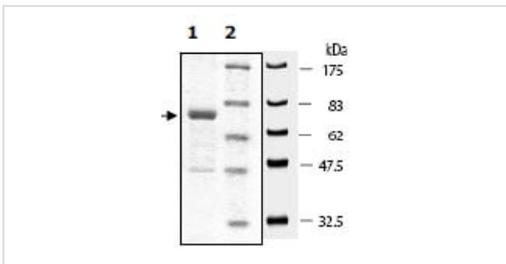


Image showing specific activity of ab95930.

Functional Studies - Recombinant human SMURF 2 protein (ab95930)



10% SDS-PAGE

Lane 1: ab95930 (4µg)

Lane 2: Molecular weight markers

SDS-PAGE - Recombinant human SMURF 2 protein (ab95930)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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