PRODUCT DATA SHEET
Affimer (HS2-B3) to Human SUMO2

Overview

Product Name	Anti-Human SUMO2 Affimer (HS2-B3)
Catalogue Code	AVA00025
Description	Affimer (HS2-B3) to Human SUMO2
Clone ID	HS2-B3
Tested Applications	ITC Co-Immunoprecipiation
Tags	C-term 6His
Conjugate	None

Properties

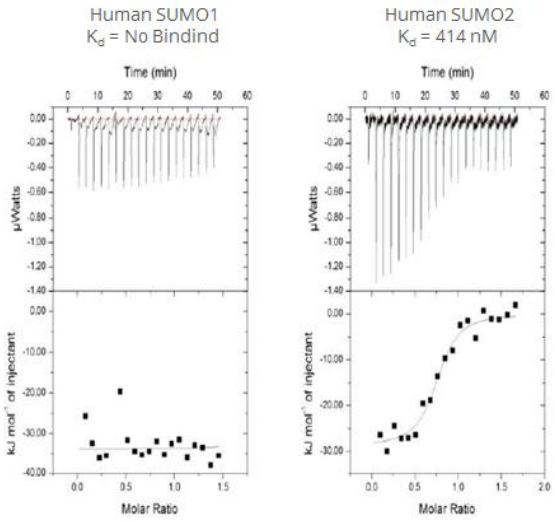
Form	Liquid
Storage Instructions	For short term use, store at 4°C. We recommend aliquoting and storing at -20°C long term. Affimers are generally unaffected by 3-4 freeze/thaw cycles.
Buffer	100mM Sodium Phosphate, 75mM Sodium Chloride, 0.02% Sodium Azide, pH 7.4
Purity	>95%
Purification Method	IMAC
Clonality	Monoclonal

Target

Target	Human SUMO2
Affimer Reactivity	Human
Target Uniprot ID	P61956
Target Function	SUMO proteins (SUMO1 and SUMO2) are ubiquitin-like proteins that can be covalently attached to proteins as a monomer or a lysine-linked polymer. Covalent attachment via an isopeptide bond to its substrates requires prior activation by the E1 complex SAE1-SAE2 and linkage to the E2 enzyme UBE2I, and can be promoted by E3 ligases such as PIAS1-4, RANBP2 or CBX4. Polymerisation is mediated by RNF4. This post-translational modification by SUMO1 or 2 on lysine residues of proteins plays a crucial role in a number of cellular processes such as nuclear transport, DNA replication and repair, mitosis and signal transduction. Polymeric SUMO1 chains are also susceptible to polyubiquitination which functions as a signal for proteasomal degradation of modified proteins. SUMO proteins interact with or have been shown to be conjugated to SAE2, PML, RANGAP1, p53, MDM2, JUN and HIF1A. May also regulate a network of genes involved in palate development.
Research Area	Cell Signalling / UPS

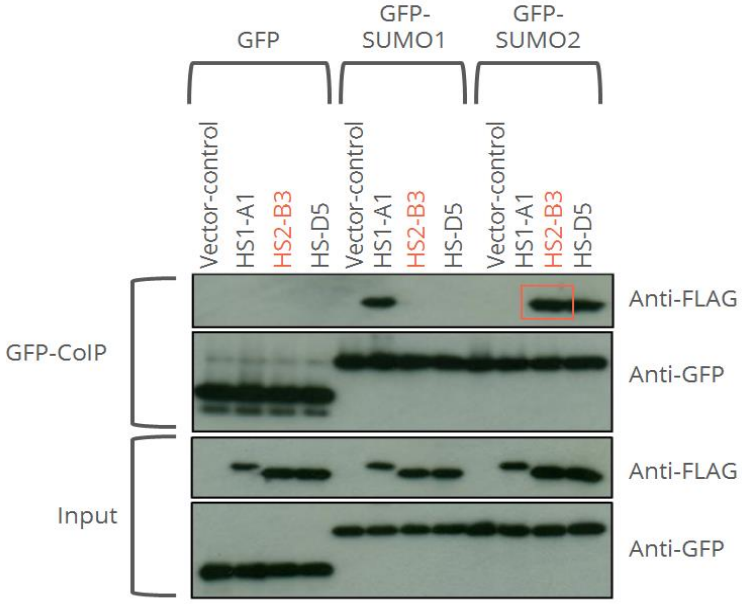
Applications

ITC



Clone HS2-B3 was shown to be specific for Human SUMO2
(Kd = 414 nM) but has no interaction with Human SUMO1 by isothermal titration calorimetry.

Co-Immunoprecipiation



HEK293T cells were (co)-transfected with plasmids bearing the target (GFP, GFP-SUMO1 or GFP-SUMO2) and Affimer (with FLAG tags) for 48 h. Cells were washed in PBS and proteins extracted in 1 ml lysis buffer containing 50 mM Tris (pH 7.4), 150 mM NaCl, 1% NP-40 and 1x protease inhibitor cocktail (Roche) for 15 min on ice and clarified by centrifugation at 12,000 xg for 10 min, 4°C. Lysates were incubated with GFP-Trap (Chromotek) for co-immunoprecipitation of GFP-labelled species. Immunoprecipitated proteins were eluted in Laemmli buffer and subject to immunoblot analysis. As marked by the red box, Affimer (HS2-B3) co-precipitates in the presence of GFP-SUMO2 but not GFP-SUMO1.