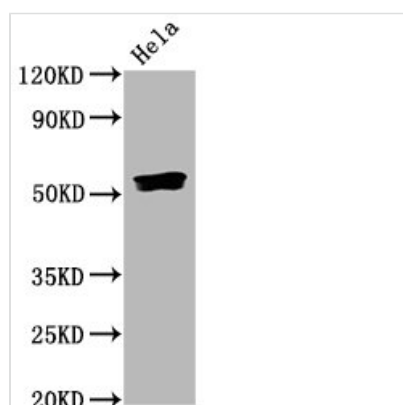




Phospho-SMAD5 (S463/S465) Recombinant Monoclonal Antibody

Product Code	CSB-RA859108A465phHU
Abbreviation	Mothers against decapentaplegic homolog 5
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q99717
Immunogen	A synthesized peptide derived from Human Phospho-SMAD5 (S463/S465)
Species Reactivity	Human
Tested Applications	ELISA, WB; Recommended dilution: WB:1:500-1:5000
Relevance	Transcriptional modulator activated by BMP (bone morphogenetic proteins) type 1 receptor kinase. SMAD5 is a receptor-regulated SMAD (R-SMAD).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Mothers against decapentaplegic homolog 5, MAD homolog 5, Mothers against DPP homolog 5, JV5-1, SMAD family member 5, SMAD 5, Smad5, hSmad5, SMAD5, MADH5
Immunogen Species	Homo sapiens (Human)
Research Area	Signal Transduction
Gene Names	SMAD5
Clone No.	3A9

Image



Western Blot

Positive WB detected in HeLa whole cell lysate

All lanes Phospho-SMAD5 antibody at

0.835µg/ml

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 52 KDa

Observed band size: 52 KDa



Description

In the production of the phospho-SMAD5 (S463/S465) recombinant monoclonal antibody, the initial phase commences with the extraction of genes responsible for encoding this SMAD5 antibody. These genes are acquired from rabbits that have been previously exposed to a synthesized peptide originating from the human SMAD5 protein phosphorylated at S463/S465. Subsequently, these antibody genes are seamlessly integrated into specialized expression vectors. Following this genetic modification, the vectors are introduced into host suspension cells, which are then meticulously cultivated to encourage the robust expression and secretion of antibodies. Following this cell culture phase, the phospho-SMAD5 (S463/S465) recombinant monoclonal antibody is subjected to a thorough purification process utilizing affinity chromatography techniques, effectively separating the antibody from the surrounding cell culture supernatant. Ultimately, the antibody's functionality is comprehensively evaluated through a battery of assays, including ELISA and WB tests, conclusively confirming its capacity to interact effectively with the human SMAD5 protein phosphorylated at S463/S465.

Phosphorylation of SMAD5 at S463 and S465 is a fundamental mechanism for regulating BMP and TGF- β signaling pathways, controlling gene expression, and coordinating various cellular processes during development and tissue homeostasis. Dysregulation of this phosphorylation event can have significant implications in developmental disorders and cancer.