

TRAP-1 (510-860): sc-4502 WB

BACKGROUND

Transforming growth factor (TGF) β receptor associated binding protein (TRAP-1) participates in the regulation of the TGF β signaling pathway. TGF β is a secreted ligand that induces transcription of various targeted genes involved in cell proliferation, differentiation and apoptosis by sequentially binding to surface TGF β Type II receptors, and inducing the auto-phosphorylation of the Type II receptor and the transient transactivation of the type-I TGF β receptor. The signal is then propagated through the Smad family of transcription factors, which leads to the expression of the targeted genes. The cytosolic TRAP-1 protein selectively associates with the phosphorylated type-I TGF β receptors, but not with the unphosphorylated type-I receptors or type-II receptors. TRAP-1 binding to the receptor results in the inhibition of TGF β signaling, thereby, inhibiting the transcription of TGF β target genes. The carboxy terminus of TRAP-1 is also able to bind to 5-lipoxygenase, a mediator of lipid metabolism for the production of leukotrienes, where it may then regulate the signaling within leukocytes and other inflammatory mediating cells.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TGFBRAP1 (human) mapping to 2q12.1-q12.2; Tgfbra1 (mouse) mapping to 1 B.

SOURCE

TRAP-1 (510-860) is expressed in *E. coli* as a 66 kDa tagged fusion protein corresponding to amino acids 510-860 of TRAP-1 of human origin.

PRODUCT

TRAP-1 (510-860) is purified from bacterial lysates (>98%) by column chromatography; supplied as 10 μ g protein in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

TRAP-1 (510-860) is suitable as a Western blotting control for sc-9134.

STORAGE

Store at -20 $^{\circ}$ C; stable for one year from the date of shipment.

RESEARCH USE

For research use only, not for use in diagnostic procedures.