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SHOC2 Rabbit pAb

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Catalog # AP58801

Product Information

Application	WB
Primary Accession	Q9UQ13
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	64888
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SHOC2/Sur8
Epitope Specificity	36-120/582
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Nucleus. Note=Translocates from cytoplasm to nucleus upon growth factor stimulation.
DISEASE	Defects in SHOC2 are the cause of Noonan syndrome-like disorder with loose anagen hair (NSLH) [MIM:607721]. A syndrome characterized by Noonan dysmorphic features such as macrocephaly, high forehead, hypertelorism, palpebral ptosis, low-set and posteriorly rotated ears, short and webbed neck, pectus anomalies, in association with pluckable, sparse, thin and slow-growing hair.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Regulatory subunit of protein phosphatase 1 (PP1c) that acts as a M-Ras/MRAS effector and participates in MAPK pathway activation. Upon M-Ras/MRAS activation, targets PP1c to specifically dephosphorylate the 'Ser-259' inhibitory site of RAF1 kinase and stimulate RAF1 activity at specialized signaling complexes. Involvement in disease:Defects in SHOC2 are the cause of Noonan syndrome-like with loose anagen hair (NSLAH) . NSLAH children display macrocephaly, high forehead, hypertelorism, palpebral ptosis, low-set and posteriorly rotated ears, short and webbed neck and pectus anomalies. Affected subjects also have easily pluckable, sparse, thin and slow-growing hair.

Additional Information

Gene ID	8036
Other Names	Leucine-rich repeat protein SHOC-2, Protein soc-2 homolog, Protein sur-8 homolog, SHOC2, KIAA0862
Dilution	WB=1:500-2000,ELISA=1:5000-10000,ICC/IF=1:50 - 1:100

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

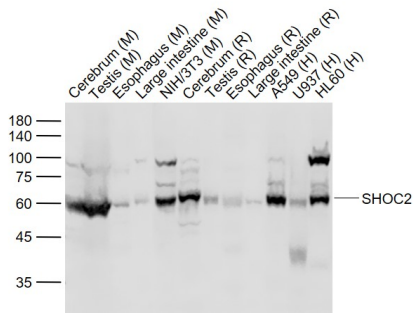
Protein Information

Name	SHOC2
Synonyms	KIAA0862
Function	Core component of the SHOC2-MRAS-PP1c (SMP) holophosphatase complex that regulates activation of the MAPK pathway (PubMed:10783161, PubMed:16630891, PubMed:25137548, PubMed:35768504, PubMed:35830882, PubMed:35831509, PubMed:36175670). Acts as a scaffolding protein in the SMP complex (PubMed:35768504, PubMed:35830882, PubMed:35831509, PubMed:36175670). The SMP complex specifically dephosphorylates the inhibitory phosphorylation at 'Ser-259' of RAF1 kinase, 'Ser-365' of BRAF kinase and 'Ser-214' of ARAF kinase, stimulating their kinase activities (PubMed:10783161, PubMed:16630891, PubMed:35768504, PubMed:35830882, PubMed:35831509, PubMed:36175670). The SMP complex enhances the dephosphorylation activity and substrate specificity of PP1c (PubMed:35768504, PubMed:36175670). Acts as an inhibitor of keratinocyte differentiation via interaction with RAS protein complexes that promote ERK activation (PubMed:23524970).
Cellular Location	Cytoplasm. Nucleus. Note=Translocates from cytoplasm to nucleus upon growth factor stimulation.
Tissue Location	Expressed in the intermediate epidermal layers, expression is weaker in the most basal and suprabasal keratinocytes (at protein level).

Background

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Images



Sample:
Lane 1: Cerebrum (Mouse) Lysate at 40 ug
Lane 2: Testis (Mouse) Lysate at 40 ug
Lane 3: Esophagus (Mouse) Lysate at 40 ug
Lane 4: Large intestine (Mouse) Lysate at 40 ug
Lane 5: NIH/3T3 (Mouse) Cell Lysate at 30 ug
Lane 6: Cerebrum (Rat) Lysate at 40 ug
Lane 7: Testis (Rat) Lysate at 40 ug
Lane 8: Esophagus (Rat) Lysate at 40 ug
Lane 9: Large intestine (Rat) Lysate at 40 ug
Lane 10: A549 (Human) Cell Lysate at 30 ug
Lane 11: U937 (Human) Cell Lysate at 30 ug
Lane 12: HL60 (Human) Cell Lysate at 30 ug
Primary:
Anti- SHOC2 (AP58801) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000

dilution
Predicted band size: 62 kD
Observed band size: 60 kD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.