

# OXA1L (N-12): sc-107911

## BACKGROUND

OXA1L (oxidase (cytochrome c) assembly 1-like), also known as OXA1, is a 435 mitochondrial inner membrane protein belonging to the evolutionarily conserved Oxa1/Alb3/YidC protein family. Members of the Oxa1/Alb3/YidC protein family are involved in the biogenesis of membrane proteins in mitochondria, chloroplasts and bacteria. Existing as three isoforms produced by alternative splicing events, OXA1L is required for the insertion of integral membrane proteins into the mitochondrial inner membrane. OXA1L is essential for the activity and assembly of cytochrome oxidase and for the correct biogenesis of F1F<sub>0</sub>-ATP synthase and NADH:ubiquinone oxidoreductase. Mutations in the gene encoding OXA1L might be involved in the pathology of combined enzymatic deficiencies of the oxidative phosphorylation (OXPHOS) system.

## REFERENCES

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3. Rötig, A., Parfait, B., Heidet, L., Dujardin, G., Rustin, P. and Munnich, A. 1997. Sequence and structure of the human OXA1L gene and its upstream elements. *Biochim. Biophys. Acta* 1361: 6-10.
4. Coenen, M.J., Smeitink, J.A., Smeets, R., Trijbels, F.J. and van den Heuvel, L.P. 2005. Mutation detection in four candidate genes (OXA1L, MRS2L, YME1L and MIPEP) for combined deficiencies in the oxidative phosphorylation system. *J. Inher. Metab. Dis.* 28: 1091-1097.
5. Stiburek, L., Fornuskova, D., Wenchich, L., Pejznochova, M., Hansikova, H. and Zeman, J. 2007. Knockdown of human OXA1L impairs the biogenesis of F1F<sub>0</sub>-ATP synthase and NADH:ubiquinone oxidoreductase. *J. Mol. Biol.* 374: 506-516.

## CHROMOSOMAL LOCATION

Genetic locus: OXA1L (human) mapping to 14q11.2; Oxa1l (mouse) mapping to 14 C2.

## SOURCE

OXA1L (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of OXA1L of human origin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107911 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

OXA1L (N-12) is recommended for detection of OXA1L of human and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

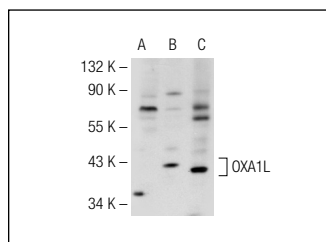
Molecular Weight of OXA1L: 42 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, OXA1L (m): 293T Lysate: sc-122293.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## DATA



OXA1L (N-12): sc-107911. Western blot analysis of OXA1L expression in non-transfected 293T: sc-117752 (A), mouse OXA1L transfected 293T: sc-122293 (B) and NIH/3T3 (C) whole cell lysates.

## RESEARCH USE

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