

Datasheet: 0100-0335

Description:	RABBIT ANTI HUMAN UNCOUPLING PROTEIN 4
Specificity:	UNCOUPLING PROTEIN 4
Format:	Purified
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	1 ml

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
ELISA	▪			
Western Blotting	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using the appropriate negative/positive controls.

Target Species	Human
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Approx. Protein Concentrations	IgG concentration 5.0 mg/ml
Immunogen	Synthetic peptide corresponding to the amino acids 271 - 283 of the native molecule (KSSTDCLIQA VQG) conjugated to Keyhole Limpet Haemocyanin.
External Database Links	UniProt:

[O95847](#) [Related reagents](#)

Entrez Gene:

[9481](#) SLC25A27 [Related reagents](#)

Synonyms	UCP4
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RRID	AB_2189922
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Specificity	<p>Rabbit anti Human Uncoupling Protein 4 antibody recognizes human mitochondrial uncoupling protein 4, also known as uncoupling Protein 4, UCP 4, Solute carrier family 25 member 27 or SLC25A27. Uncoupling protein 4 is a 323 amino acid, ~36kDa multiple pass, inner mitochondrial transmembrane protein bearing three Solcar repeats (UniProt: O95847)</p> <p>Uncoupling protein expression appears to be primarily associated with mitochondria of the central nervous system, with no protein being found in a number of peripheral organs when tested in immunohistochemistry, or western blotting in mice and rats. In mice uncoupling protein 4 appears in early to mid embryonic development coinciding with the initiation of neuronal differentiation and expression in mitochondria decreases with age, hinting at a possible role in neuronal differentiation (Smorodchenko et al. 2009). UCP4 facilitates the dissipation of heat across the inner mitochondrial membrane, by leaking protons across the membrane and uncoupling oxidative phosphorylation from ATP synthesis (Mao et al. 1999), the action of uncoupling protein 4 increasing proton concentration in the mitochondrial matrix may thus serve to increase ATP production by the class II complex (Ho et al. 2012). UCP4 is understood to be involved in thermoregulatory heat production and metabolism in brain.</p>
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Western Blotting	In reduced blots on bovine brown adipose tissue homogenates, this antibody recognises specific bands at ~34 & 44 kDa and other bands at ~50 & 60 kDa that can be blocked with KLH.
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Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
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Guarantee	18 months from date of despatch.
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Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
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Regulatory	For research purposes only
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Related Products

Recommended Secondary Antibodies

Sheep Anti Rabbit IgG (STAR34...) [FITC](#)
Goat Anti Rabbit IgG (H/L) (STAR124...) [HRP](#)
Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)
Sheep Anti Rabbit IgG (STAR35...) [RPE](#)
Sheep Anti Rabbit IgG (STAR36...) [DyLight®488](#), [DyLight®680](#), [DyLight®800](#)

Recommended Useful Reagents

[TidyBlot WESTERN BLOT DETECTION REAGENT:HRP \(STAR209P\)](#)

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From March 15, 2021, we will no longer supply printed datasheets with our products.
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'M335027:181203'

Printed on 09 Feb 2021

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