

Datasheet for 200-901-P11S**L1/ORF2 Antibody****Overview**

Description:	Anti-L1/ORF2 (CHICKEN) Antibody - 200-901-P11S
Item No.:	200-901-P11S
Size:	25 µL
Applications:	ELISA, IHC
Reactivity:	Mouse
Host Species:	Chicken

Product Details

Background:	L1/ORF2 is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI) and is suitable for Cancer, Immunology and Nuclear Signaling research. The L1 (LINE-1), or Long Interspersed Element , retrotransposon ORF2 is the most common open reading frame in the human genome, present in various forms in many thousands of copies. This large family of proteins includes magnesium dependent endonucleases and a large number of phosphatases involved in intracellular signaling. Both intact ORF1 and ORF2 are absolutely required for autonomous retro-transposition. ORF2 encodes an endonuclease, reverse transcriptase, and zinc knuckle domains. The expression of ORF2 appears to be tightly regulated except in germ line tissues, embryonic tissues, and certain cancers including teratomas, testicular cancers, and leukemias. This antibody is intended for use in studying control of L1 retrotransposons.
Synonyms:	chicken anti-L1/ORF2 Antibody, chicken anti-L1-ORF2 Antibody, L1 (LINE-1), Long Interspersed Element , retrotransposon ORF2
Host Species:	Chicken
Clonality:	Polyclonal
Format:	IgY

Target Details

Gene Name:	Pol
Reactivity:	Mouse

Immunogen Type:	Conjugated Peptide
Immunogen:	This IgY fraction antibody was prepared from eggs of chickens laid after repeated immunizations with three synthetic peptides conjugated to keyhole limpet hemocyanin (KLH). The peptides correspond to regions within the endonuclease domain of L1/ORF2 protein.
Purity/Specificity:	Anti-L1/ORF2 Antibody is directed against three regions within the endonuclease domain of L1/ORF2 protein. This product is an IgY fraction antibody purified from monospecific chicken egg yolks by a multi-step process which includes selective precipitation and salt fractionation followed by extensive dialysis against the buffer stated above. Reactivity occurs against mouse L1/ORF2 protein and is useful in determining its presence in various assays. A BLAST analysis shows reactivity with L1/ORF2 proteins from mouse sources based on 100% homology with the immunizing sequences. Cross reactivity against L1/ORF2 from other sources is unknown.
Relevant Links:	• UniProtKB - P11369 • NCBI - AAC72810.1

Application Details

Tested Applications:	ELISA
Suggested Applications:	IHC (Based on references)
Application Note:	L1/ORF2 Antibody has been tested for use in ELISA. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 149.5 kDa in size corresponding to L1 protein by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:20,000-1:100,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.21 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

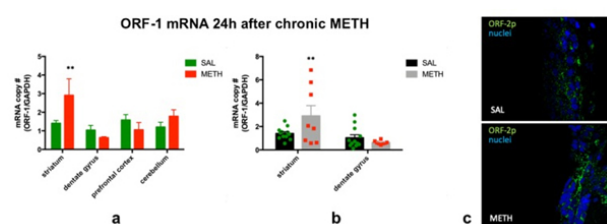
Shipping & Handling

Shipping Condition:	Dry Ice
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Storage Condition: Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.

Expiration: Expiration date is one (1) year from date of receipt.

Images



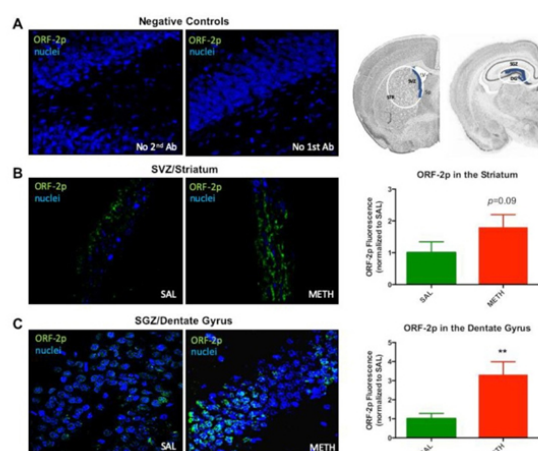
Immunohistochemistry

(a). The effect of chronic METH (20 mg/kg/d, for 10 d, i.p.) on ORF-1 mRNA levels in rat striatum, dentate gyrus, prefrontal cortex and cerebellum at 24 h after the last dose of METH or saline.

(b). Individual mRNA values in the striatum and dentate gyrus.

(c). Representative image of increased immunofluorescence for ORF-2p in the SVZ. Abbreviations: h, hour; METH, methamphetamine; SAL, saline; SVZ, subventricular zone. ** Statistical significance p < 0.01, METH vs. SAL. Fig 2.

PMID: 32231019



Immunohistochemistry

The effect of two daily 20 mg/kg METH doses on ORF-2p immunoreactivity in rat striatum and dentate gyrus at 24 h after the 2nd injection of METH or saline. (A) No-secondary (2nd) antibody control, no-primary (1st) antibody control and graphic presentation of dissected out tissue (white ovals), with delineated subventricular and subgranular zones (SVZ and SGZ, blue lines). (B) ORF-2p immunoreactivity in the SVZ. (C) ORF-2p immunoreactivity in the SGZ and dentate gyrus. Abbreviations: METH, methamphetamine; SAL, saline; SGZ, subgranular zone; SVZ, subventricular zone; ORF-2p, ORF-2 protein. ** Statistical significance, p < 0.01, METH vs. SAL. Fig 3. PMID: 32231019

References

- Pavlová S et al. Hypomethylating agents increase L1 retroelement expression without inducing novel insertions in myeloid malignancies. *Mol Oncol.* (2025)
- Moszczynska, A. Differential Responses of LINE-1 in the Dentate Gyrus, Striatum and Prefrontal Cortex to Chronic Neurotoxic Methamphetamine: A Study in Rat Brain. *Genes* (2020)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.