



LRG

Cancer / Inflammation / iNPH (idiopathic normal pressure hydrocephalus)

Research Use Only

Among the diseases which should be distinguished from iNPH (idiopathic normal pressure hydrocephalus) of elderly people showing symptoms such as gait disorder and dementia, there are some neurodegenerative diseases such as Alzheimer's disease (AD), FTLD (frontotemporal lobar degeneration) and disorder associated with Parkinson's disease. This ELISA kit can measure LRG (Leucine-Rich alpha-2-Glycoprotein) in CSF, blood or urine. It has become possible to distinguish iNPH from neurodegenerative diseases such as AD by measuring LRG in CSF.

ELISA (96Well)

Product Code	Sample Type	Product Name	Measurement Range	Measuring Sample				
				Serum	EDTA-Plasma	Urine	CSF	Super-natant
27769	Human	Human LRG Assay Kit – IBL*1	1.56 ~ 100 ng/mL	○	○	○	○	/
27785	Mouse	Mouse LRG Assay Kit – IBL*2	0.25 ~ 16 ng/mL	○	○	/	/	※2
27770	Rat	Rat LRG Assay Kit - IBL	6.25 ~ 400 ng/mL	○	○	○	/	○

※1. 27769D100 Human LRG EIA Buffer 100 (100mL) is available with additional charge.

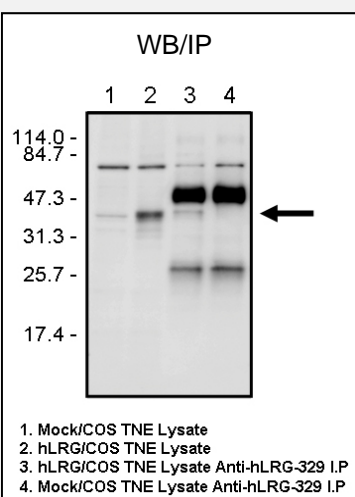
※2 . It may strongly react to FCS contained in supernatant used depending on the lot of FCS.

Antibody

Product Code	Sample Type	Product Name	Application	Size1	Size2
28085	H	Anti-Human LRG (329) Rabbit IgG Affinity Purify	IHC, WB	100μG	10μG
28069	R	Anti-Rat LRG (128) Rabbit IgG Affinity Purify	IHC, WB	100μG	10μG

28085 Anti-Human LRG (329) Rabbit IgG Affinity Purify

28069 Anti-Rat LRG (128) Rabbit IgG Affinity Purify

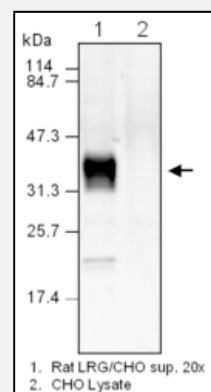


IHC (Human Brain)

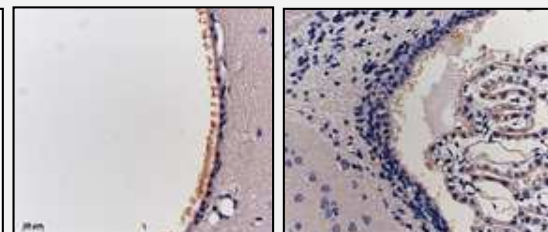


This antibody can be used for IHC of astrocyte localized in human brain, human glioma cell and astrocyte cultured cell.

WB



IHC (rat chorioid plexus and surrounded brain ventricle)



This antibody can be used for IHC of rat chorioid plexus and surrounded brain ventricle.

Data provided by: Prof. Masakazu Miyajima, Department of Neurosurgery, Juntendo University School of Medicine

Reference

- Li X, Miyajima M, Mineki R, Taka H, Murayama K, Arai H. Analysis of potential diagnostic biomarkers in cerebrospinal fluid of idiopathic normal pressure hydrocephalus by proteomics. *Acta Neurochir (Wien)*. 2006 Aug;148(8):859-64

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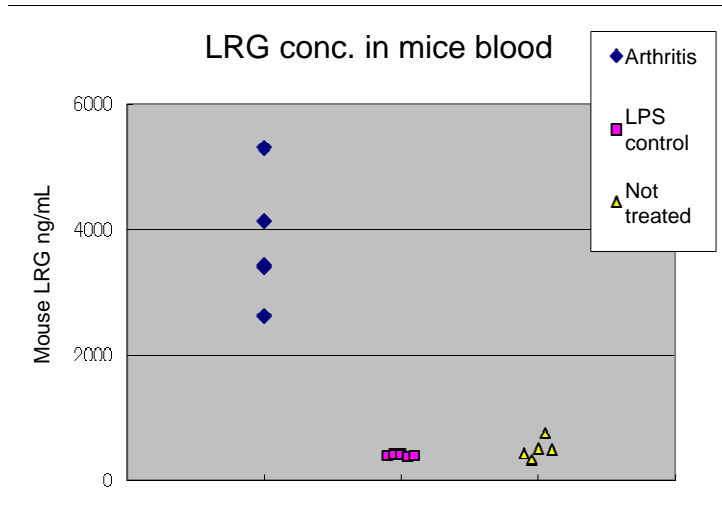


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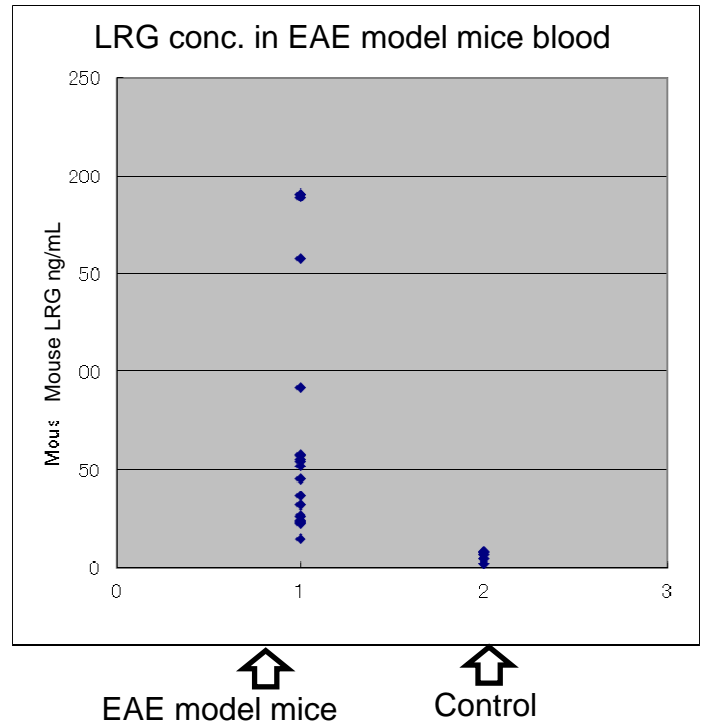
LRG has been attracting attention as active bio-marker of inflammatory related diseases.

Fig1: Measurement of the concentration of LRG in blood of arthritis evoked mice.



Used monoclonal cocktail antibody for evoking arthritis. (supplied by Iwai Chemicals Company)

Fig 2. Measurement of the concentration of LRG in blood of EAE model mice (EAE: Experimental autoimmune encephalomyelitis)



LRG is a useful tool as a monitoring marker of inflammatory diseases such as arthritis or EAE.

Reference

1. Serada S, Fujimoto M, Terabe F, Iijima H, Shinzaki S, Matsuzaki S, Ohkawara T, Nezu R, Nakajima S, Kobayashi T, Plevy SE, Takehara T, Naka T. Serum leucine-rich alpha-2 glycoprotein is a disease activity biomarker in ulcerative colitis. *Inflamm Bowel Dis.* 2012 Nov;18(11):2169-79
2. Ha YJ, Kang EJ, Lee SW, Lee SK, Park YB, Song JS, Choi ST. Usefulness of serum leucine-rich alpha-2 glycoprotein as a disease activity biomarker in patients with rheumatoid arthritis. *J Korean Med Sci.* 2014 Sep;29(9):1199-204.
3. Serada S, Fujimoto M, Ogata A, Terabe F, Hirano T, Iijima H, Shinzaki S, Nishikawa T, Ohkawara T, Iwahori K, Ohguro N, Kishimoto T, Naka T. iTRAQ-based proteomic identification of leucine-rich alpha-2 glycoprotein as a novel inflammatory biomarker in autoimmune diseases. *Ann Rheum Dis.* 2010 Apr;69(4):770-
4. Wang X, Abraham S, McKenzie JA, Jeffs N, Swire M, Tripathi VB, Luhmann UF, Lange CA, Zhai Z, Arthur HM, Bainbridge JW, Moss SE, Greenwood J. LRG1 promotes angiogenesis by modulating endothelial TGF- β signalling. *Nature.* 2013 Jul 18;499(7458):306-11.
5. Watson CJ, Ledwidge MT, Phelan D, Collier P, Byrne JC, Dunn MJ, McDonald KM, Baugh JA. Proteomic analysis of coronary sinus serum reveals leucine-rich α 2-glycoprotein as a novel biomarker of ventricular dysfunction and heart failure. *Circ Heart Fail.* 2011 Mar;4(2):188-97.