

HISTOPRIME[®]

CatNo E001

Chromogranin A,

Monoclonal Antibody against Chromogranin A

(Marker of human endocrine granules).

Lot: See Label
Storage: +2 to +8 °C
Exp. Date: See Label

Specificity

Hormone-producing organs and various hormone-producing cells in non-endocrine cells form the endocrine system. These hormone-producing cells are also referred to as the "diffuse neuro-endocrine system" (DNS)¹, in which biogenic amines are both stored and decarboxylated (APUD concept)¹. Although there are major functional differences among DNA cells due to the production of different hormones, they have in common the presence of chromogranin in the secretory granules.

Initially, chromogranin was identified as the major secretory protein of medullary chromaffin cells of the adrenal gland². However, in more recent immunohistochemical studies, it has been recognized as a widespread marker of almost all granule-containing endocrine cells and the tumors arising from them³⁻⁶. The behavior of tumor staining is proportional to the number of secretory storage granules present. Most endocrine tumors exhibit strong staining with the exception of small cell lung carcinoma, Merkel cell carcinoma, and neuroblastomas, which (with E001) assume only weak staining.

Contents

Reagents sufficient for about 60-120 tissue sections
1 dropper bottle **HISTOPRIME[®] Chromogranin A** (Bottle, 6 ml)

Application

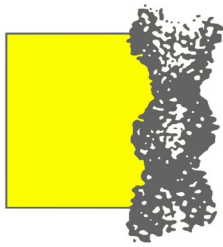
This monoclonal antibody shows a reaction with human chromogranin; also, with chromogranin in monkey and pig tissues. Furthermore, it has been shown to be useful in the identification of chromogranin polypeptides by Western blotting⁴ and in the purification of chromogranin from human adrenal glands⁷. The identification of neoplastic neuroendocrine tissue is also possible with this antibody.

Fusion Partners

Female Balb/ c mice were immunized with human pheochromocytoma tissue. Spleen cells from these animals were then fused with NS-1 myeloma cells using the method of Galfre et al.³.

E001-220109-1/3





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Characterization

Antigen	Chromogranin A (MW 68,000) and related chromogranin polypeptides.
Specificity	Neuroendocrine cells
Cross Reactivity	Human, Monkey, Pig
Abnormal Tissues	Neoplastic neuroendocrine tissue.
Clone	LK2H10
Isotype	Mouse IgG1
Pretreatment	Proteolytic pretreatment with enzymes not required.
Incubation Period	1 hour by room temperature
Control tissue	Pancreas
Application	Ready-to-use in PBS, BSA, NaN ₃ (0.09%) pH 7.4(*) suitable on cryostat sections and on formalin-fixed, paraffin-embedded tissue sections.
Recommended Secondary Reagents	Alkaline Phosphatase Vectastain [®] ABC Mouse IgG (Vector CatNo AK-5002) and Substrate-Kit e.g. Vector [®] Red (Vector CatNo SK-5100). Peroxidase Vectastain [®] ABC-Elite Mouse IgG (Vector CatNo PK-6102) and Peroxidase Substrate-Kit e.g. DAB (LINARIS CatNo E108) or HistoGreen (LINARIS CatNo E109).

References

1. Blaschko, H., Comline, R. S., Schneider, F. H., Silver, M., Smith, AD: Secretion of a chromaffin granule protein, chromogranin, from the adrenal gland after splanchnic stimulation. *Nature*, 215:58 (1967).
2. DeStephano, D. B., Lloyd, R. V., Pike, A. N., Wilson, B. S.: Pituitary Adenomas: An immunohistochemical study of hormone production and chromogranin localization. *Am.J.Pathol.* 116:464 (1984).
3. Galfre, G., Howe, S. C., Milstein, C., Butch, A. W. and Howard, J. C.: Antibodies to major histocompatibility antigens produced by hybrid cell lines. *Nature*. 266:550 (1977).
4. Lloyd, R. V. and Wilson, B. S.: Specific endocrine tissue marker defined by a monoclonal antibody. *Science* 222:628 (1983).
5. Lloyd, R. V., Mervak, T., Schmidt, K., Warner, T., Wilson, B. S.: Immunohistochemical detection of chromogranin and neuron-specific enolase in pancreatic endocrine neoplasms. *Am. J. Surg. Pathol.* 8:607 (1984).
6. Pearse, A. G. E.: The diffuse neuroendocrine system and the APUD concept: Related endocrine peptides in brain, intestine, pituitary, placenta and anuran cutaneous glands. *Med. Biol.* 55:115 (1971).
7. Ann E., Walts, Jonathan W., Said, I. Peter, Shintaku and Ricardo V., Lloyd: Chromogranin as a marker of neuroendocrine cells in cytologic material- an immunocytochemical study. *Am. J. Clin. Pathol.* 84, 3, 273-277 (1985).

Differential identification is aided by the results from a panel of antibodies. Interpretation must be made within the context of the patient's clinical history and other diagnostics tests by a qualified pathologist.

(*)Note E001 contains Sodium Azide; take adequate precautions!

E001-220109-2/3

For Research use only. Not for use in diagnostic procedure

Manufacturer

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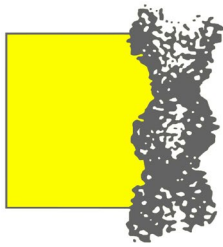
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HISTOPRIME®

CatNr E001

Übersicht

Immunhistochemische Darstellung von humanem Chromogranin in normalem und neoplastischem, neuroendokrinem Gewebe.

Gewebe / Organ	Befund	Anfärbung mit Anti-Chromogranin LK2H10 positiv / gesamt
Nebennierenmark	Normalgewebe	10 / 10
	Neuroblastom	4 / 10
	Phäochromozytoma	25 / 25
Paraganglien	Normalgewebe	1 / 1
	Karzinom	5 / 5
Nebennierenrinde	Normalgewebe	0 / 10
	Karzinom	0 / 2
Pankreas	Normale Inseln	5 / 5
	Endokrines Neoplasma	15 / 20
Schilddrüse	Normale C-Zellen	5 / 5
	C-Zell-Hyperplasie	5 / 5
	Medulläres Karzinom	6 / 6
	Normale follikuläre Zellen	0 / 10
	Follikuläres Karzinom	0 / 3
	Papilläres Karzinom	0 / 3
	Hurthle-Zell-Karzinom	0 / 3
Nebenschilddrüse	Normalgewebe	2 / 2
	Adenom	2 / 3
Hypophysenvorderlappen	Normalgewebe	5 / 5
	Adenom	6 / 10
Hypophysenhinterlappen	Normalgewebe	0 / 5
Zentrales Nervensystem	Astrozyten	0 / 4
Gehirn	Epiphyse	0 / 1
	Astrozytome	0 / 5
Peripheres Nervensystem	Nerven	0 / 11
	Neurofibrom	0 / 4
	Neurinom	0 / 4
Magen	Endokrine Zellen	3 / 3
	Karzinoid	3 / 3
Dünndarm	Endokrine Zellen	3 / 3
	Karzinoid	2 / 2
Kolon	Endokrine Zellen	4 / 4
Lunge	Endokrine Zellen	1 / 3
	Kleinzelliges Karzinom	4 / 10
Haut	Merkel-Zell-Karzinom	2 / 3
Plazenta	Normalgewebe	0 / 4
	Chorionkarzinom	0 / 2

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