

| Meet the Marker: VISTA

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VISTA (V-domain Ig-containing suppressor of T-cell activation), also known as PD-1H, has recently emerged as a marker of interest in cases of cancer. Initial research appears to show a correlation between VISTA expression and a positive prognosis. However, its exact mechanism of action is still the subject of ongoing study.

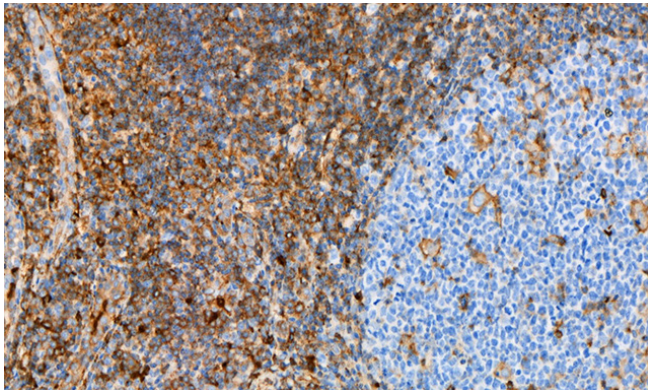
VISTA is a member of the immunoglobulin (Ig) superfamily and is a homolog to PD-L1.1 It is primarily expressed on granulocytic myeloid cells and T cells and has been identified as an immune checkpoint protein belonging to the B7 family immune checkpoint proteins.^{1,2} As part of this role, VISTA has been shown to regulate T cell function in hematopoietic cells and leukocytes.³

In studies of its prognostic effects, the expression of VISTA has been positively correlated with prolonged overall survival.² In one such study of the effects of VISTA expression on pancreatic ductal adenocarcinoma (PDAC), VISTA expression was associated with a favorable prognosis.² Similar studies have suggested that VISTA may act as a positive prognostic biomarker in a range of solid tumor cancers.^{1,4} However, while high levels of VISTA expression have been correlated with better overall survival rates, disease-specific survival rates remain somewhat unclear.^{1,4}

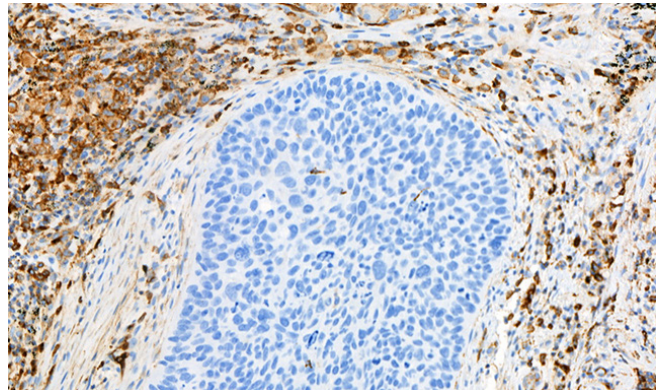
Several explanations for VISTA's prognostic applications have been proposed and are undergoing further study. One proposed mechanism is that of immunosurveillance. Research has found that VISTA expression is significantly associated with high levels of CD8+ tumor-infiltrating leukocytes (TILs).³ TILs have been associated with antitumor effects, likely because infiltration by immune cells indicates the immune system's recognition and response to cancer cells.³ Therefore, this evidence may support VISTA's role as a positive prognostic marker.³

VISTA's association with immune system activation may also lend itself to future therapeutic applications.

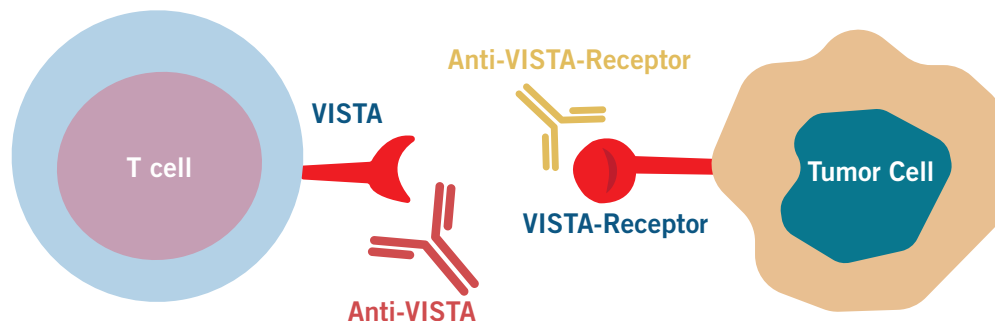
VISTA stains and illustrations



Tonsil stained with VISTA [BLR035F] antibody



Lung cancer stained with VISTA [BLR035F] antibody



To learn more about Biocare's VISTA offerings, please call 1-800-799-9499, option #3, or visit our website at [biocare.net](https://www.biocare.net)

1. He, X. L., Zhou, Y., Lu, H. Z., Li, Q. X., & Wang, Z. (2020). Prognostic value of VISTA in solid tumours: a systematic review and meta-analysis. *Scientific reports*, 10(1), 2662. <https://doi.org/10.1038/s41598-020-59608-w>

2. Hou, Z., Pan, Y., Fei, Q., Lin, Y., Zhou, Y., Liu, Y., Guan, H., Yu, X., Lin, X., Lu, F., & Huang, H. (2021). Prognostic significance and therapeutic potential of the immune checkpoint VISTA in pancreatic cancer. *Journal of cancer research and clinical oncology*, 147(2), 517–531. <https://doi.org/10.1007/s00432-020-03463-9>

3. Tagliamento, M., Agostinetti, E., Borea, R., Brandão, M., Poggio, F., Addeo, A., & Lambertini, M. (2021). VISTA: A Promising Target for Cancer Immunotherapy?. *Immunotargets and therapy*, 10, 185–200. <https://doi.org/10.2147/ITT.S260429>