

Phagosome

A **phagosome** is a **membrane-bound vesicle** formed around a **particle** engulfed by a phagocytic cell through the process of **phagocytosis**. Once internalized, the phagosome fuses with **lysosomes** to form a **phagolysosome**, where the contents are degraded by **enzymes**.

Phagosomes play a crucial **role** in the **innate immune response**, particularly in the clearance of **pathogens** and apoptotic cells. In the context of **glioblastoma (GB)**, changes in **phagosome-related protein expression** may reflect alterations in **immune surveillance**, **tumour-associated macrophage activity**, and **neuroinflammatory mechanisms**.

Recent studies, such as those by Liu et al. have linked **phagosome pathways** to potential **biomarker candidates** in GB, suggesting a role in disease progression and tumour-host interactions ¹⁾

¹⁾
Liu X, Abmanhal-Masarweh H, Iwanowytsch O, Okwelogu E, Arashvand K, Karabatsou K, Ivo D'Urso P, Roncaroli F, Kostarelos K, Kisby T, Hadjidemetriou M. Plasma-to-tumour tissue integrated proteomics using nano-omics for biomarker discovery in glioblastoma. Nat Commun. 2025 Apr 10;16(1):3412. doi: 10.1038/s41467-025-58252-0. PMID: 40210624.

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