HansaBioMed Life Sciences

Pioneering the Extracellular Vesicle field

EV-Enolase activity assay kit

Enolase activity on Extracellular Vesicles

Enolase (EC 4.2.1.11), also called 2-phospho-D-glycerate hydrolase or 2-phosphoglycerate dehydratase, is a key enzyme in glycolysis. It converts 2-phosphoglycerate to phosphoenolpyruvate (PEP) & also catalyzes the reverse reaction, PEP to 2-phosphoglycerate under anabolic conditions during gluconeogenesis. This enzyme exists in all organisms, which can undergo glycolysis. Enolase activity is easily detectable in extracellular vesicles (EVs) derived from eukaryotic cells and it could be used for evaluating functionality and stability of EVs. Moreover, it's increased activity is associated with tumorigenesis and therefore precise measurement of enolase activity may be of great interest for EV-based tumor diagnosis.

Cat. Code	Description
HBM-K691-EN	Enolase activity measure on Extracellular Vesicles
Shippment and storage: Kit is shipped at controled temperature with ice pack. Store the components as indicated in the product datasheet.	

Characteristics

- $1x10^8$ particles per reaction
- Contains Lyophilized EVs as positive control
- Fluorimetric and colorimetric readout

Applications

- Determination of the Enolase activity in purified/isolated EVs
- EV characterization by functional properties
- Mechanistic studies of EVs from cancer origin

Advantages

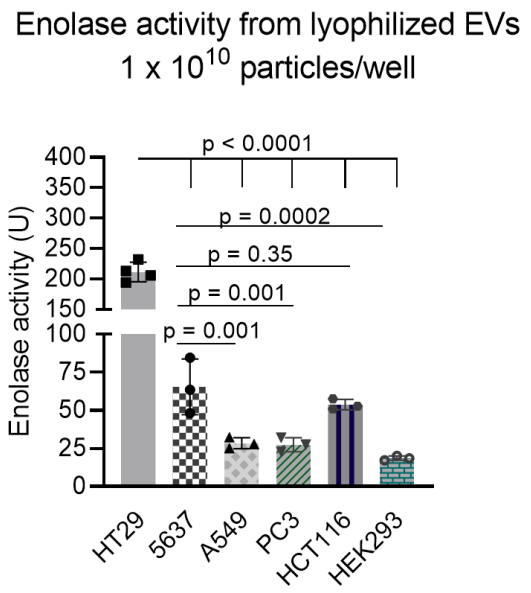
- Ready to use
- Suitable for measuring Enolase activity from fresh, frozen or lyophilized EVs

Addressing the heterogenity of EVs

Application in Extracellular Vesicle research

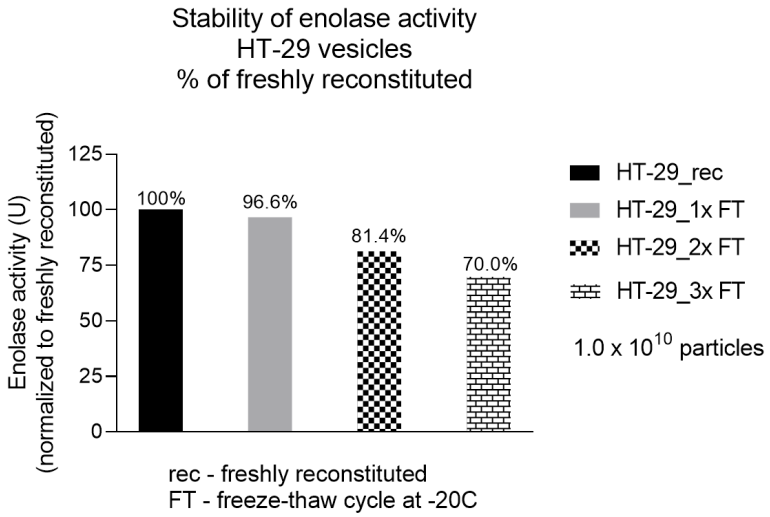
Cancer cell derived EVs show different profile of enolase activity

Enolase activity in EVs isolated from conditioned media of various cell lines. 1x10[10] particles were used and the enolase activity was calculated based on the standard curve. Statistical analyses with one-way ANOVA and Dunnett's multiple comparison test. Symbols are biological repeats, bars indicate means and error-bars are SDs.



Enolase activity is indicative of the EV state

Lyophilized HT-29 EVs were reconstituted in MilliQ water and 1, 2 or 3 freeze-thaw cycles at -20° C were performed. Enolase activity was normalized relative to the freshly reconstituted EVs (rec). One freeze-thaw cycle does not affect the enolase activity compared to the freshly reconstituted sample.



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